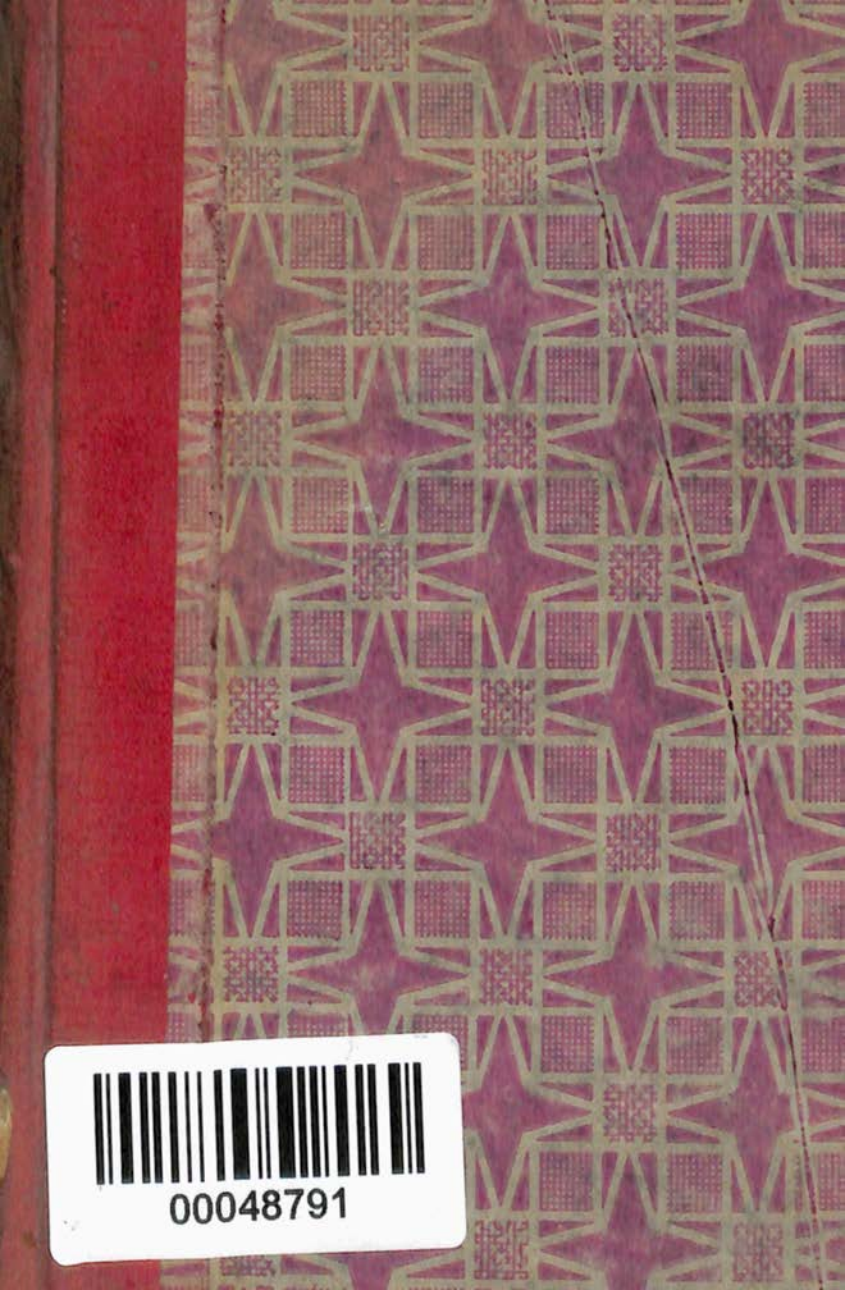
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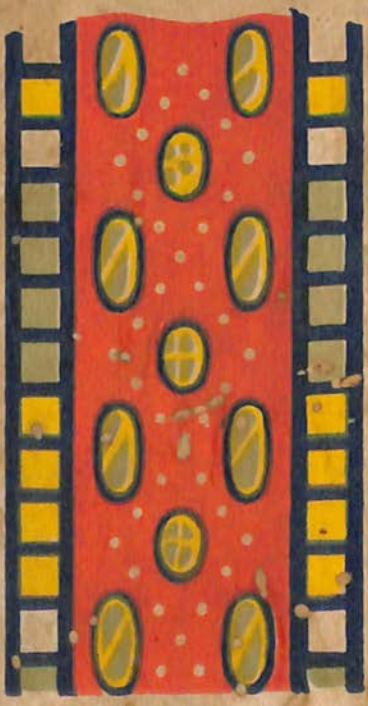

THE EGYPTIANS

IN THE TIME OF THE PHARAOHS.

BEING A COMPANION TO THE CRYSTAL PALACE EGYPTIAN COLLECTIONS.

By Sir J. GARDNER WILKINSON,
D.C.L., F.R.S.
Author of "The Private Life, Manners, and Customs of the Ancient Egyptians."

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TO WHICH IS ADDED

AN INTRODUCTION TO THE STUDY OF

THE EGYPTIAN HIEROGLYPHS.

By SAMUEL BIRCH.

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PREFACE.

GREAT facilities have been afforded for the comparison of different styles of architecture by the many specimens brought together in the Crystal Palace at Sydenham; and the books describing the Courts not only serve as guides to thos who actually visit them, but give a very useful and instructive insight into the general history and character of art and architecture at different periods.

But for a knowledge of the customs and occupations of the Egyptians, much more is to be obtained from the tombs than from the sculptures of the public buildings. The variety of the tombs, however, is so great, that it is not possible to give even a general, much less a complete, notion of the numerous subjects represented in them; and it appeared necessary that Egypt should have to itself an account of the paintings in its tombs, and the scenes they describe. I have, therefore, undertaken a sketch of this subject:

and, though it must necessarily be treated briefly, compared to that already given in the "Manners and Customs of the Ancient Egyptians," I am glad to have an opportunity of introducing into it some new matter and illustrations not contained in that work.

At the same time, the expense they would entail obliges me to omit many illustrations I would gladly have introduced; and I therefore limit myself on this, as on the previous occasion, to such as appear most essential for the purpose. But, in justice to those who have had to incur the expense, and to show that it was not with them a question of *a few more*, I think it right to say that in the previous work it was found absolutely necessary to omit many more than a hundred of those I had selected as illustrations, and in the present one more than half that number; while, in stating this, I disclaim all pretensions to any unusual diligence in their collection, and place far before my own the importance of the materials contained in the portfolios of Mr. Hay and some other English travellers. I only wish to show how difficult it would be to give full illustrations of all that Egypt offers relating to its customs.

In order to distinguish the subjects that belong to the tombs and to the temples, I have separated the two as much

as possible: and the account of the habits and pursuits, in the first part, which is derived from the tombs, will explain how very much we are indebted to them for an acquaintance with the domestic life of the Egyptians, and how important are the subjects on their walls for supplying what is unnoticed on the public monuments. If, too, I have repeated the notice of some of the crafts and customs, this was owing to their being a necessary part of the description of the tombs themselves, and inseparable from the mention of the occupations of the people, or other subjects represented in the paintings within them. But the limits of this work have not allowed me to enter into the religion or the history of the Egyptians; their institutions, or their advancement as a nation; and even their sculpture and other arts could only be partially noticed.

The progress of the Egyptians from early times would certainly be an interesting inquiry. They were a people peculiarly wedded to their customs, in which time made little or no alteration, and the few changes they underwent, or admitted, as in the size of their temples, or the luxury of their homes, were mostly consequent upon advancement in wealth and civilisation. In other respects, they were much the same under the early and later Pharaohs. But it must be borne in mind that we do not see them in their infancy

as a nation; we find no archaic style of art, no primæval habits; and the *general character* of the people, as of their architecture, had been long established when we first become acquainted with them from their monuments, and continued to be the same till the decline of Egyptian power. What their primitive habits were it is difficult to say, or what they might have become if left unfettered by conventional regulations. For conventional customs are artificial, and imposed on a people. They have them not naturally; and though a marked character distinguishes various races (as well as individuals), mere conventional customs are the result of special training. The rules may be based on the early habits of the people themselves (like the Egyptian mode of drawing the human figure in profile, with the eye in front); but without these impediments, they would improve upon and rid themselves of their early imperfections; and the maintenance of old peculiarities, or the subserviency to new ones, is always attributable to an artificial cause.

When we first become acquainted with the Egyptians, we find they were already guided by conventional rules, which prevented all great changes in their habits during the long period recorded by their monuments; but that they should have had so marked an effect upon them is less surprising when we recollect how some even of the Greeks

were prevented by a similar cause from adopting habits which characterised the rest of their race; and whatever influence the nature of their country or any accidental causes may have had on the Spartans, the difference of their customs, tastes, and character was more attributable to their institutions than to any peculiarities of their own.

It is not probable that anything will be found to show what the Egyptians were when an infant nation; and we have no grounds even for speculation as to their condition, power, or customs when they migrated into the valley of the Nile. Much has been said of resemblances between them and the people of India; and the cow of Athor, at Dendera, worshipped by our sepoy soldiers, has been cited as a proof of a similarity of religion. Of this, however, we may be certain, that neither the Hindoos borrowed from Egypt, nor Egypt from the Hindoos, who were not even settled south of the Punjab at the time when Egypt was flourishing. Whatever relationship may have existed originally between the Egyptian and Hindoo races before they both left central Asia, we look in vain for any between them after that period. Even if commerce at a later time established an indirect intercourse with any part of India, this could have had little influence on the customs of either people, who never came into actual contact; and

with regard to southern India, the aboriginal tribes of that peninsula (its sole possessors in those days) were of a totally different extraction from the Hindoos, who overran the country at a period comparatively modern in the history of Egypt. If certain customs of the Egyptians are found to resemble those of the Hindoos, they do not prove any relationship between the two races; and we may look to the Asiatic origin of the Egyptians to account for any analogy between them and other Oriental nations of antiquity.

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with which each event is pourtrayed, enable us almost to transport ourselves back to those early days. Every building and every court bid us comprehend the condition of Egypt in those days, and judge of its importance among the nations of its time. Yet this was before the era ascribed by received opinion to the Argonautic expedition and the Trojan war; and when Troy is said to have been taken, Egypt had already passed its meridian, and was falling from its high estate.

For monuments of the greatest antiquity in Egypt, it is necessary to look much farther back than the glorious age of the eighteenth dynasty; and our surprise is increased by finding that already before the days of Abraham the Egyptians had the same institutions and domestic habits as at the time of the Persian conquest under Cambyses; and that the customs of the kings who erected the pyramids, and of the inmates of the old tombs in their vicinity, differed in no important points from those of their successors. They also knew the use of squared stone, and even granite, as well as limestone. The masonry of the passages in the Great Pyramid has not been surpassed at any age; and those monuments are so accurately placed north and south that the variation of the compass may now be ascertained from the direction of their sides. At the same period, not only the citizen, but the soldier, had already laid aside his arms, when within the city and in the house; their code of laws had long been framed; they had the same mode of writing hieroglyphics on the papyrus-paper as in after-times; the same reed-pen and inkstand; the same papyrus-roll bound up and sealed; and if some new hieroglyphics were added at different times, and greater variety was introduced in architectural ornament, there was no marked alteration in the character of the monuments until after the decadence of art, in the time of

the Ptolemies and Cæsars. They had duodecimal as well as decimal calculation;—the method of numeration by units, tens, hundreds, and thousands; and the division of the year into

(W. 1.) 1000 100 10 3

twelve months of thirty days each; ornaments of gold and silver; the same use of wine, apparently, too, brought in the same kind of glass bottles; musical instruments; and, with the exception of horses and chariots, the paintings then represent the usual industrial pursuits of after-times. And all this at a period which could not be less than 2400 years before our era, or upwards of 4000 years ago. For though the high antiquity once given to those edifices is now brought within more reasonable limits, by the fact of many early kings having reigned contemporaneously, it is impossible to assign a lower date to the monuments of the fourth dynasty.

Nor is there any doubt that the oldest tombs at the pyramids are of the same era as those monuments: even the names of kings painted on the stones before they were built into the upper chambers of the Great Pyramid occur in some of the tombs; and no one who *sees* them will fail to perceive that they are of individuals who lived in the reigns of the founders of the pyramids and their immediate successors; in whose service many held important offices. And the age of the pyramids themselves is acknowledged by Memphis being already called "the land of the pyramid" in the reigns of Suphis, Papi, and Osirtasen, of the fourth, fifth, and twelfth dynasties.

Egypt has also a high interest from having been the spot chosen for the promulgation of the important doctrines which liberated man from superstition, and from the perversions of

the priesthood of those days. It was in Egypt that God "made himself known unto the Israelites;"* and "at the first did visit the Gentiles to take out of them a people for his name."† And there the only community that retained the germ of true religion, and was competent to uphold the doctrine of the unity of the Deity, was set apart that it might receive a divine law, which would in "the fulness of time" fit it to be the medium of a more complete revelation.

Egypt also at a subsequent period exercised very great influence on the fate of the Jewish people under their latter kings. It was then a fast declining power. Assyria was rising to wrest from it all its conquests in the East; and the Jews, placed in a difficult position between the two rivals, and compelled to side with one or the other, were exposed to the resentment of the victor. In vain did the voice of prophecy warn them of their danger. The temporary successes of Egypt blinded them to its falling condition, until the simile of the "broken reed" having been too fully exemplified, the time had passed to remedy the error; and Egypt thus brought upon the Jews the vengeance of an enemy from whom it could no longer protect them, the houses of Israel and Judah being condemned to the captivity of Assyria and Babylon.

But though a dire calamity for that people, it was part of a scheme destined to produce inestimable results. Even the Jews themselves perceived and admitted that this great affliction had tended to secure them from temptations of idolatry, to which they had so often given way: and they were thus fitted to carry out the grand design and ultimate object of their selection as the "chosen people."

Egypt, it is true, was only one of many indirect causes of these events, but its name ever will be connected with them;

* Ezekiel xx. 5. † Acts xv. 14.

and it is remarkable for the influence it exercised on the early condition of other nations.

In architecture, in ornamental taste, and in many early works of art, they were greatly indebted to Egyptian models; recent discoveries in Assyria have shown this to be the case to an extent even beyond what was generally supposed; and many an original idea was borrowed from Egypt by the Greeks, and improved upon by the taste of that talented people. This will appear more clearly in examining the customs of the Egyptians, respecting which we obtain so much information from the monuments;—the only authorities deserving of implicit confidence. For, though the Greeks, at a remote age, obtained an acquaintance with many arts from the Egyptians, they knew little of them as a nation; and even those who visited Egypt in after-times, before the accession of the Ptolemies, never became thoroughly conversant with their customs. They saw a very small portion of the country, and being ignorant of the language, they could not hold that direct intercourse with the inhabitants, so necessary for becoming acquainted with their ideas and feelings. They depended on the *ciceroni* or *valets-de-place* of those days, who mixed up what they knew very imperfectly themselves with certain set ideas and tales handed down from others who had gone before them; whose blunders find a parallel in those of the Frank quarter of the modern capital. From these, indeed, we may form an estimate of the information obtained of old by the Greeks, provided at the same time we allow for those exaggerations which the known marvels of Egypt gave so tempting an opportunity of indulging in; the country being reputed to "contain more wonders than any other," and marked by peculiarities such as could now only be paralleled in China. The lively imagination of the Greeks, together with their hasty conclusions respecting

foreigners (whom, whether superior or inferior to themselves in civilisation and social habits, they stigmatised as barbarians), and their readiness to invent tales adapted, as they supposed, to manners they did not understand, helped to distort the picture; while their absurd stories about kings and their daughters, so inconsistent with the customs of a people like the Egyptians, were the result of unpardonable prejudice, and of depraved ideas. The information, therefore, so obtained, can only be relied on when not at variance with the monuments, or with probability; while its general uncertainty may be inferred from some of the false impressions it is known to have conveyed. Thus, we are told that onions were worshipped; that Isis had the head of a cow; Anubis that of a dog (instead of a jackal); that a sphinx was composed of a lion and a virgin; that an Egyptian doorway had sloping sides (which in reality are confined to the *outer* line of the jambs*); that obelisks were only dedicated to the sun; that a crocodile moved its upper, instead of its lower jaw; that the trochilus, a most obliging bird, performed the office of toothpick to that unprepossessing monster, removing the leeches from its gaping mouth; that vines grew only in one part of the country; that men carried burdens on their heads, women on their shoulders; that ships made of the papyrus, or of planks sewed together with bands of that rush, carried cargoes of many tons weight, and even sailed on the ocean; that the Egyptian gods were deified beings who had lived on earth; and numerous other fallacies handed down as established facts. The name of Egypt conveyed certain conventional impressions; with it were associated one particular kind of building, one unvarying character of the people; and Egypt, the parent of hieroglyphics, was hieroglyphically represented in men's minds by fixed notions.

* See below, woodcut 115.

The Romans judged of it in much the same way as the Greeks. A mosaic, or a fresco, was thought to convey the idea of Egypt to the spectator, by the introduction of a pyramid, an obelisk, or a sphinx; the worship of sacred animals, and of those few deities whose names happened to be known out of the country, were supposed to represent all that its religion could pretend to; and "monsters such as Egypt produces," were more thought of in connection with its name than all the wisdom that distinguished it among the nations of antiquity. Even the Greeks of Alexandria, and the Romans after them, knew nothing of the Egyptian religion; nor did they really understand the nature of all their own deities, some of whom were adopted from the Nile: and Cicero is often puzzled to explain them in his inventory of the Pantheon.

Till recent enquiries had been made into their habits, the Egyptians were believed to have had a gloomy, serious character; massive buildings of prodigious size, colossal statues, and immense columns, were considered the unvarying characteristics of their architecture; and few would have supposed that they admitted lengthy slender columns, extending up the whole face of a house, of two or more floors in height, from the ground to the cornice; or that they were the first to invent the arch, and to use it commonly in their crude brick houses and tombs. These and many other unexpected facts are distinctly proved by the monuments; and many of their tastes and inventions, the furniture and ornaments of their houses, as well as their mode of life, will be found to differ greatly from the ordinary impressions received respecting the ancient Egyptians.

Our authorities, the monuments, consist chiefly of two kinds: the temples, and the tombs. Of the houses, few vestiges remain, their crude brick materials having been em-

ployed for other purposes, or converted, by the increased level of the inundation, into their original condition of mud; for few dwellings were of stone, except some apartments, attached to the temples, belonging to the kings and priests, which were only intended for occasional use; and their family mansions and villas were built of the same simple materials as the ordinary houses of the country.

The sculptures in the temples relate chiefly to offerings made to the gods, the victories of the kings, and other events which I shall notice after having described the tombs; these last being of particular interest, from their illustrating so many of the customs and occupations of the Egyptians.

One very usual subject in the tombs is the reception of guests at a party; and Egyptian artists, fully alive to caricature, have sometimes shown that the little follies of gossip, display of finery, and conceit, were as common in those days as in later times. Here, a man of fashion arriving in his curricle long after the other guests are assembled, thinks to increase his consequence by this affectation, as well as by the number of his attendants and running footmen; there, women examine, with the eyes of envy or curiosity, the jewellery of a neighbour; and the profusion of gold and silver vases set out on the side-board, proclaim, by their utter uselessness on the occasion, that love of display alone procured them a place in the festive chamber. In another place, the consequence of the master and mistress of the house is indicated by the submissive obeisance made to them by the dancers and musicians hired to entertain the company; and as the principal people who gave these entertainments were of the priestly class, we learn, that however they might lecture the people on the propriety of considering this life a mere passage to a future state, and of mortifying their appetites for pleasure, they were themselves by no means

averse to the good things of this world, and enjoyed their comforts like the rest of the community.

Nor do the artists omit to notice some of the appliances that contributed to their comforts and those of their guests. Among these were the precautions taken against the heat of a southern climate. Their rooms were spacious, and protected against the sun; their gardens abounded in shady avenues of trees, with large tanks of water, and apparently fountains. Water was sprinkled abundantly through the courts, and around the house; and, though they had not adopted all the luxuries of India, they had many contrivances for obtaining coolness during the heat of the day. Attendants, too, waved before them large feather-fans on certain occasions; and a figure in Dr. Abbott's collection holds in his hand what bears a strong resemblance to one of our European and Chinese fans.

Music and dancing are always at their feasts, as well as games, both within and out of doors; and the various trades of the carpenter, boat-builder, potter, leather-cutter, glass-blower, and others, have always a marked position on the walls of a tomb.

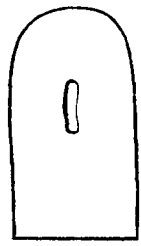
In one part the funeral procession is represented: where the hearse, placed on a sledge drawn by oxen and men, is preceded by priests and by the mourners—men and women who throw dust on their heads, and utter the same kind of lamentations as at a modern Cairene, or at an Irish, funeral. Various emblems, the chariot, and articles of furniture, belonging to the deceased, and the sacred boats of the dead, are also introduced, as well as the last judgment, which holds so conspicuous a place in the ceremonies of the Egyptians.

These are some of the principal subjects on the walls of the tombs, which will be mentioned more in detail as we proceed.

Both in the tombs and temples the subjects varied slightly at different periods; for in the temples of early time, which were as yet of small dimensions, it was not usual to introduce the representation of victories, even on the exterior. Sacred subjects occupied the whole of that limited space; and its walls within were also devoted to sculptures relating to religious rites. These were always retained upon the interior of the sanctuary itself, however large the building became; and no battle-scene was admitted, even in the eighteenth and nineteenth dynasties, nearer to the *adytum* than the portico, or the great hall of assembly.

When the temple was as yet little more than the original square chamber, the Pharaohs were satisfied to record their victories on tablets engraved on rocks, or on *stelæ*, set up in some chosen spot, which, having the form of an Egyptian shield (fig. 2), were probably derived from an earlier custom of using it for that purpose. It contained the date of the king's reign, the name of the people he had defeated, and whatever important consequences attended his success; and above was the king, making offerings to the deity, to whose interference the victory was ascribed. As yet, these subjects had not become pictorial.

1


2

(W. 2.)

The oldest tombs, however, as at the pyramids, contained almost as great a variety of subjects as those of the eighteenth and subsequent dynasties; and the sepulchral grottoes of Beni Hassan, of the twelfth dynasty, offer even more than any single tomb of later date.

It is interesting to find from them that (as before stated) the

Egyptians had already the habits and customs of after-times; and I shall have an opportunity of noticing the early date of some inventions and usages generally ascribed to much more recent periods.

Whatever their religion may have been in their infancy as a nation, it had evidently the same general character, as well as their laws and institutions, from the earliest periods of which the monuments have left us any record; and even if any new law was introduced, it only carried out the system already framed of old, and was the natural result of experience and the advancement of society. Nor did some little innovations in the rights and ceremonies, nor the occasional adoption of a new, or even of a foreign, god, so conveniently tolerated by polytheism, make any real alteration in their religion; and the prominence given to the mysteries and office of Osiris in the sixth, and still more in the eighteenth and succeeding dynasties, were only the fuller development of an old doctrine. Whatever change was introduced of a contrary tendency was forcibly introduced by some foreign king; as when Amun was banished from the Pantheon; and the expulsion of the heterodox "stranger" was the signal for the restoration of the old and favourite deity.

In their manners and customs, too, the changes that time brought about were very trifling; and, as I have already stated, the fact of the oldest monuments representing a people already having the customs of their later civilisation, while it takes us back to an era beyond the reach of all known history, suggests this obvious question—how long a time must have elapsed before the Egyptians could have reached that advanced state in which they are introduced to us by the monuments?

It is unnecessary to offer any conjectures respecting the few

customs not recorded before the age of the Osirtasens and the Shepherds' invasion; which last may be considered the turning point in their history. Those customs may have already existed, even though not represented, since the monuments of that time are few; for many that we know they had are only found once, while others are never alluded to. Every new tomb of any size is sure to contain something unnoticed in another; and it would be too much to expect that if all the tombs of Thebes were now open to us, they should contain a perfect list and illustration of *all* the employments or customs of the Egyptians. We have reason to be grateful for what we have.

Much is of course to be learnt of the manners of a people from their domestic usages, the style and furniture of their houses, their mode of living, their amusements and daily occupations, and we have therefore ample opportunities of judging of the character and social habits of the Egyptians. The mistake of supposing them a grave and gloomy people will become evident when we examine those instructive authorities; and if some ancient writers have represented them "rather sad," and others a vivacious and hasty people, we shall not find it difficult to account for any change after Egypt had been for ages subject to a series of calamities and the oppressions of foreign rule. And the mixed population of Alexandria and its neighbourhood, from whom foreigners too often formed an estimate of their manners, could not certainly convey any notion of the Egyptians under the Pharaohs.

It is certain that however much their priestly rulers impressed upon them the propriety of abstinence and sobriety, the Egyptians were noted for a love of conviviality, and lost no opportunity of indulging in the most lively amusements, as well as in the pleasures and even in the excesses of the table.

Indeed, the fact of this advice being thought so necessary suffices to prove the character of the people who required it; and those who suppose, from the introduction of the figure of the human mummy at a festive meeting, in order to remind them of the transitory nature of this life's pleasures, that the Egyptians enjoyed their recreations in a serious mood, have made not only a hasty but an inconsistent conclusion; not very unlike that which might pronounce the morality of a people from the number of methods devised to deter them from vice. They were the reverse of a serious people; and while their philosophers gave their attention to grave abstruse studies, the rest of the community appreciated a merry life, and were remarkable for a love of excitement, quite consistent with the scenes of buffoonery and the talent for caricature so often displayed in the paintings.

They indulged very freely in wine, many qualities of which were highly esteemed in Egypt. Of these the most noted were the Mareotic, the Anthyllan, the Teniotic, the Sebennytic, the Coptite, and a few others; those "of the north" appear to have been reputed the best; and in after-times, when the trade with Greece was opened, wines from that country, as well as from Phœnicia, were imported into Egypt. It always had its place on the altars of the gods, as well as on the tables of the rich; it was not forbidden to the priests; and a certain quantity was always allowed to the soldiers on duty in the city, as part of their daily rations. It was kept in earthenware jars, resembling the *amphoræ* of the Romans, and arranged in the same manner upright in the cellar; and if in late times they occasionally carried it in skins, this was rather a Greek than an Egyptian custom; and Athenæus mentions a monster skin made of panthers' hides, displayed in the festive procession of Ptolemy Philadelphus, on a four-wheeled car, twenty-five cubits

long and fourteen broad, drawn by 600 men, which contained 3000 jars of wine.

The Egyptians, also, at an early time, had excellent beer, which, in default of hops, was flavoured by lupins, skirret, and an Assyrian root. The "bitter ale" made by the Basses and Allsops of Pelusium was noted as the best; and we may suppose it was by no means bad when praised by the Greeks, who held beer in great contempt; for Diodorus, a native of a wine country, considers it scarcely inferior to the juice of the grape. Its use, however, was mostly confined to those who could not afford good wine; and the paintings do not mention it at parties given by wealthy Egyptians.

They were particularly fond of music and dancing; the most austere priest could not give an entertainment without a good band of musicians and professional dancers, as well as plenty of wine, rich ointments and perfumes, a profusion of flowers, and a capital dinner. Tumblers, jugglers, and various *artistes* skilled in feats of agility, were engaged for the occasion; and the guests themselves played at games of chance, at *mora*, so common now in Italy, odd and even, draughts, and other favourite pastimes. These were all of very old date, at least as early as the fourth dynasty, more than 4000 years ago.* In *mora* each player threw out the fingers of one hand while he endeavoured to guess the united sum of both: the game was in later times common in Rome, and is now played by every idler in an Italian street.

Draughts was a favourite game of all ranks; and King Remeses III. is more than once represented playing at it in the palace at Thebes. The number of men cannot exactly be ascertained; they were of different colours on the opposite side of the board, and were not flat pieces like our own, but about

* Popular Account of the Ancient Egyptians, vol. i. p. 190.

one and a-half to one and three-quarter inches high; and when moved were taken up with the finger and thumb as our chessmen.

The greater part of their games within doors were played by professional people hired to amuse the guests, who sat round on elegant chairs and couches, while the performers displayed their skill in the open space purposely left in the centre of the room. At one time a conjuror produced his pea, and astonished the ever-mistaken novice with thimble-rig, performed with four cups;* at another, tumblers, mostly women, performed various evolutions, throwing themselves over and over backwards, "in the manner of a wheel," singly or two together;† some, again, standing on each other's backs, made a somersault to the ground; while others, wearing high foolscaps, or with their long hair dressed to resemble them, turned head over heels without deranging their projecting head-gear, occasionally holding one foot with the hand during the performance.

(W. S.)

To excel in these feats required long training, and was not

* P. A. of Ancient Egyptians, vol. i. p. 203. † Ib., p. 189.

attained without severe tuition. The company of tumblers belonged to a proprietor, who instructed them in the art; and a sharp chastisement was often inflicted during the "rehearsals" on a negligent performer. Many of them were foreign slaves; as were some of those who constituted a higher class of performers, and who excelled in a dance consisting of graceful posture, analogous to the "Ionic movements" of Greece, and the *Almeh* gestures of modern Egypt.

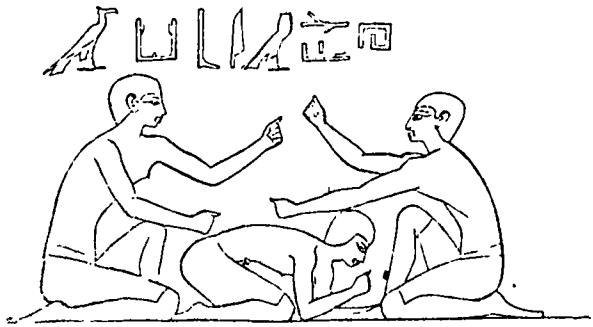
Games of ball were also favourite amusements; and they had various ways of playing. Women were again the principal performers; and their mode of throwing up several balls, and catching them in succession, was a piece of dexterity which excited admiration in those as in modern days. At other times, one person, seated on the back of a companion, threw the ball to the opposite player, until one of the two, failing to catch it, lost the post of honour, and was in turn obliged to submit herself to the same beast-of-burthen office; in token of which, the Greeks, who also had this game, gave to the bearers the name of "Asses," while the riders were called "Kings." In another game, the performer threw the ball as high as she could; and then leaping up, caught it before her feet touched the ground again—corresponding to the *ουρανια* ("skyball") of the Greeks; and it was sometimes thrown to the opposite player, who caught it in the same manner while jumping from the ground. Others threw and caught it standing on one leg, with their hands behind their back.*

(W. 4.)

* See P. A. of Ancient Egyptians, vol. i. p. 199; figs. 4, 5, 6.

The ball was very like many of our own, about three inches in diameter, sewed with string crosswise at its one seam, and stuffed with bran, thread, husks of corn, or small rushes, and covered with leather.

Another feat was performed by a couple of men, who, holding two women by the wrist, whirled them round as they reclined backwards, each with her feet pressed against those of her companion.* Others, placing a hoop between two hooked sticks, strove who should first snatch it away from his adversary †; and a sort of forfeits was played by two men, who, holding some wooden counters in their hands, or striking the back of a third as he knelt between them, obliged him to guess the number, or



(W. 5.)

which gave the blow. Another feat consisted of sitting back to back, and striving who should first rise from the ground; and sometimes two men contended who should throw a knife nearest to the centre, or the edge, of a block of wood—the number of times deciding the winner of the stake. But many of these were rather out-of-doors amusements than exhibitions to divert a party, as was the trial of strength in raising weights.

* P. A. of Ancient Egyptians, vol. i. p. 201. † Ibid. p. 194.

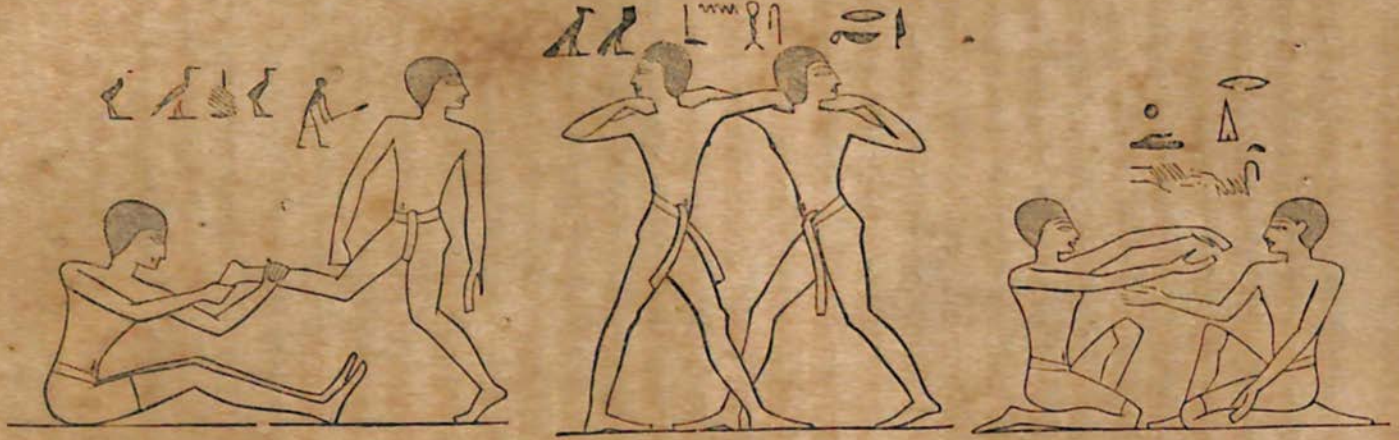
(W. 6.) Men fighting with poles, in boats made of the Papyrus. In the water is a Hippopotamus, and on the bank grows the Papyrus plant.

Wrestling was also among the games of the Egyptians, as well as other trials of dexterity;* and the grottoes of Beni Hassan show all the numerous positions, modes of attack and defence, and various artful resources adopted by wrestlers; as well as sham fights, and the more serious conflicts of single-stick and quarter-staff. Conflicts with long poles (still a favourite weapon with the Egyptians) were very common among the peasants and boatmen of the Nile (woodcut 6); and Herodotus tell us of a battle with sticks, which was part of a religious ceremony.

Bull-fighting was also a favourite sport. It was even allowed in the avenue leading to the temple of Pthah (Vulcan) at Memphis; and prizes were given to the owner of the successful bull, as they were to those men who excelled in wrestling and other games.* Nor are these the only pastimes represented at Beni Hassan; and tricks of various kinds, not always very intelligible to a modern spectator, are recorded in the paintings of the tombs†; some of which I shall introduce here, as it may be amusing to try to understand them, or they may possibly be explained by future discoveries (woodcut 7).

The games were exhibited before and after dinner; and nothing was omitted that could promote festivity, or the entertainment of the party. Music was the most popular, and was always introduced at the very commencement of a feast, as soon as the guests arrived. The instruments were principally harps, lyres, guitars, drums, tambourines of various shapes, clappers, double and single pipes, flutes, and a few others of less common occurrence; and they were often accompanied by songs and the clapping of hands. Sometimes a *solo* was performed on one of these instruments; but it was more usual

* For various games, see P. A. of Ancient Egyptians, vol. i. pp. 189—211.
† Ibid. vol. i. p. 194.



(W. 7.) 1 2 3

Other unknown games represented at Beni Hassan.

to have a combination of many; and the Egyptians were acquainted at a very early time with the triple symphony: the harmony of instruments, of voices, and of voices and instruments. Their bands were often composed of a harp, lyre, and guitar, double pipe and tambourine; of a fourteen-stringed harp, a double pipe, and a lyre of seventeen chords, with voices; of two harps, a flute, and voices; of a harp, a guitar, and a double pipe or of two flutes; of a harp and two guitars, with a double pipe and the clapping of hands; of two harps, and a jingling instrument which may correspond to the crescent-crowned bells of our military bands; besides many other combinations.* And in a tomb at the Pyramids, built in the early time of the fourth dynasty, bands were already composed of two harps, a pipe, and flute, with several voices.

The musicians on these occasions were hired performers; and though many of the harpers and choristers were poor and blind, the occupation seems to have agreed with them, some being inordinately fat.

(W. 8.)

For though music formed part of the education of an Egyptian gentleman, he did not display his musical talents at a party; but in the temple, at funerals, and in several religious ceremonies, men and women of high rank, belonging to the priestly order, played the harp and other instruments adapted to sacred music; and many devoted themselves to the service of religion in the capacity of minstrels of various deities.

* See P. A. of Ancient Egyptians, vol. i. pp. 85—134.

The instruments were of various compass. The harps were of four, six, seven, eight, nine, ten, eleven, twelve, fourteen, seventeen, twenty, twenty-one, or twenty-two strings; and lyres are represented of five, seven, ten, and eighteen. Both were of very varied shape; and some harps were highly ornamented with leather, painted in bright colours. Harps of a small size were frequently raised on a stand or foot, and played by the performer seated on the ground; to others it was customary to stand, as to the large harps in the tomb of Remeses III., at Thebes, which are of ten and twelve strings, and are ornamented with the head of a king, and painted with the richest colours. Both men and women played the harp; but, when of very great size, it was usually represented in the hands of men.

Of the lyre there were many varieties, which were mostly played by men. It was frequently ornamented with the head of a gazelle, oryx, or some other animal,—an idea adopted by the Greeks, whose lyre, formed of the horns of an Egyptian

(W. 9.)

antelope (unknown in Europe), was improved upon by their taste, and made into a far more elegant instrument. Like

that of Greece, it was played with the two hands, or with the *plectrum*, a small implement, made of bone, ivory, or hard wood; or with this, and one hand. It was held under one arm, and sometimes supported by a strap over the shoulders; but there is no indication of the band across the left hand, used by the Greeks.

Neither in the harp, nor in the lyre, had they any means of shortening the strings, during the performance, by any contrivance like our pedals; they could therefore only play in one key; but this want was less felt when the instruments were chiefly accompaniments to the voice. The harp was tuned by pegs; the chords of the lyre by sliding them up the inclined bar, when the two limbs were of different lengths. This was a very common form; and a lyre, which was in the

(W. 10.)

centre twenty-two inches high, measured on one side with its limb about two feet; on the other, one foot eight inches in height. When the limbs were equal, the strings were tightened by rolling them round the transverse bar, as in the *kisirka*, or modern Nubian lyre.

The invention of a stringed instrument might be of a very early age; and a harp, or a lyre, of one octave, might be used as well as the drum, the tambourine, and the pipe, long before Music became a science, and when the simplest melody was alone attempted. For at first, all music was confined to melody; that of uncivilised man is always in a minor key; and the same may be said of the winds, and other sounds of nature.

The strings of their instruments were of catgut; and it is probable that the acquaintance with their sound was first obtained from the twang of the bow used by the hunter, long before the harp was thought of; and the earliest musical sounds were perhaps obtained from the pipe made of a reed, which continued to be used in Egypt to a late time. Dr. Burney, indeed, thinks that "in the infancy of music no other instruments were used than those of percussion;" but, with great deference to his opinion, it may be said that, though the clapping of hands was the first union of many rude performers, the earliest efforts to obtain *musical* sounds were from some kind of pipe, quite as easy to construct as an *instrument* of percussion. It is the pipe of the shepherd and the mountaineer that we hear in the wildest countries; and the first attempt of the child is to make a whistle, or a pipe, from some common plant.

The primitive flute was also a very simple instrument. In Egypt it was called *sĕbi*, the same name as the "bone of the leg," showing how it was originally made. It was sometimes of a hard wood; and a few have been found, like the pipe, made of reed. Some Roman flutes were also of bone; and the name *tibia*, corresponding with the Egyptian *sĕbi*, exclains, like the words *avena* and *fistula*, applied to the pipe, the material of which it was often formed. The pipe, however, was also called *tibia*; and the flute was distinguished by the epithet *obliqua*. The

latter was, in later times, bound with brass; when it was said, by Horace, to have "emulated the trumpet;" and I have seen one found at Rome, of bone, sheathed entirely with brass, which had only a diameter of an inch and a half, and measured five and a half inches from the top to the fifth hole, where it was broken off. The first hole was an inch and a half from that for the mouth; and it had five holes on the upper and two on the under side, and may, when entire, have been about nine inches in length; showing that its power as an instrument was very limited, and that it depended for its effect rather on its shrillness than the fullness of its tones. It was also much smaller

(W. 11.)

than the Egyptian flute, which exceeded two feet in length. This was played by men, who stood, or sat on the ground; and an instance is met with of a man playing on one at Thebes, which must have been about four feet long.

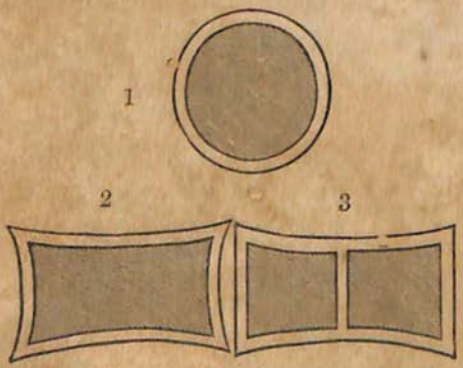
(W. 12.)

To discover, rather than to invent, these simple instruments, required little skill; but before they could devise the means of obtaining various notes from a small number of strings, by shortening them on a neck, as in our modern guitar and violin,

considerable experience was required; and this could only have resulted from an attentive study of musical sounds. The three-stringed guitar, therefore, proves that the Egyptians had acquired a knowledge of music at a very remote time, for, though not represented in a band of music earlier than the eighteenth dynasty, it is found among the hieroglyphics upwards of 600 years before that period, as the initial of the word *nofr*, "good."

The guitar had a long neck, about twice the length of its oval body; which last was a hollow case of wood, with leather or parchment strained over it, having small holes to allow the sound to escape. It was played with the *plectrum;* and as the *cithara* of Greece was smaller than the other Greek lyres, the guitar of the Egyptians was of less power than their lyre. Women generally played it; men rarely. It was supported on the right arm, and even by a strap over the shoulder, like the Spanish guitar; while the strings were shortened by the left hand; and the performer occasionally danced to its sound.

Besides the lyre and guitar, were several instruments that held a place between them; some of which have been found in the tombs, and are preserved in the British and other Museums.*



(W. 13.)

The tambourine, and the *darabóoka* drum of modern Egypt, were used at funerals, as well as on festive meetings. The tambourine was of three different kinds; one of which, of round shape, is still so common

* P. A. of Ancient Egyptians, vol. i. pp. 118—125.

throughout the East, as well as in Europe (woodcut 13). It was the *taph* of the Hebrews, the timbrel, or tabret, that Miriam, and the women after her, took in their hands; when they celebrated the deliverance of the people "with timbrels and with dances." It is the only form now used in Egypt; and in the upper country it is introduced on occasions of mourning as well as of rejoicing, with the same rude kind of song as of old; but the *darabóoka* (woodcut 14), made of parchment, strained over one end of a cone, or a cylinder, of earthenware, is an instrument of mirth, like the common drum, which was also known to the ancient Egyptians. This last was braced like our own, and beaten in the same

(W. 14.)

manner with two sticks; but the hand-drum was precisely

similar to the *tomtom* of India. It formed part of the military band; and the buffoons in the street danced to its sound (woodcut 15).

Most of the Egyptian instruments were admitted on occasions of festivity and rejoicing; but the trumpet was chiefly confined to the military band; to which also belonged, though not exclusively, the *tomtom*-drum, the clappers, and a few others.

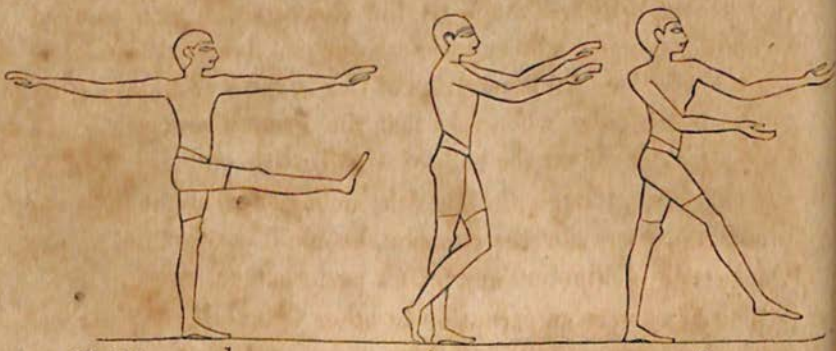
Cymbals were mostly used by the sacred minstrels. They were of metal, and like those of modern days, though smaller, being from five and a half to seven inches in diameter. Clappers, the *crotala* of the Greeks, were of hard wood, bone, ivory, shells, or metal; which, held one in each hand, were struck together, and, giving a sharp sound, like our castanets, were often used as an accompaniment to other instruments. Sometimes a man danced a *solo* to their sound, and to the clapping of hands. They were also admitted in festive and solemn ceremonies. But the sistrum was peculiarly appropriated to religious rites, and its jingling sound was thought to drive away Typhon, or the devil. To hold it in the temple was a highly honourable office, entrusted only to the queens, and those holy women who dedicated themselves to the service of the gods, and who seem to have constituted a sort of sacred college, or sisterhood, resembling in some degree the conventual communities of later times; though their vows did not prevent their attending also to social and other duties, as wives, and members of society.

Sacred music was much used in Egypt; and the harp, lyre, guitar, flute, double-pipe, tambourine, clappers, cymbals, and sistrum were admitted in various religious services, of which music formed an important part, as with the Jews.

Dancing was quite as indispensable at an Egyptian party as music, and the performers were in like manner hired for the occasion. They did not pride themselves only on the variety of

(W. 16.) Figure and Posture Dances. (On the dancing of the Greeks, *see* Classical Museum, vol. iii. p. 229—244.)

their steps, but on the graceful attitudes they assumed during the performance, and figure dances were also great favourites. Both men and women danced for hire; but the latter being more graceful were selected for dances requiring elegance of



(W. 17.)

posture; and this, as well as a greater natural facility of balance, recommended them for feats of tumbling.

To stand on one foot, while singing, was equally an accomplishment at an Egyptian as at a Roman party; and being a common attitude at the beginning as well as in the middle of a dance, it was chosen as the hieroglyphic to signify "dancing." But one of the most remarkable steps in the Egyptian dance was the *pirouette*, which there excited the applause of spectators about 4000 years ago; and some other steps of our modern *ballet* seem to have been known to them (woodcut 17).

Sacred dancing was also practised in the religious ceremonies of Egypt; nor was it considered ill-suited to such occasions by the Jews;* and some religious ceremonies were accompanied with dances, feasting and games; as when the Israelites having "offered burnt offerings" to the golden calf, "sat down to eat, and to drink, and rose up to play;" and were found by Moses "dancing" before it.

* "The name" of God was "praised in the dance."—Ps. cxlix. 3.

Though fond of dancing, no Egyptian gentleman took a partner, or performed a solo at a party: they did not consider it the same becoming occupation as the Greeks; and when these foreigners settled in the country, the Egyptians looked upon this accomplishment much as the Romans did, and as most Orientals now do, who suppose no one can dance unless he is well paid for it. An illustration of this is the well-known story of the Turk, who, when told that the French and other ambassadors danced at the ball of the British embassy, said he was sure that, though the British ambassador might hire the minor ministers for the occasion, he could never afford to pay the French plenipotentiary for his performance.

The Jews were an exception to other Orientals: they danced both in private, and on sacred occasions; and the young ladies of Jewish families in Syria still delight their friends with their skill in the dance. Nor would the splendour of their dresses, with the festoons of pearls, and of gold coins, diamonds, and other jewels they wear at these festive meetings, have been unworthy of the daughter of Herodias.

These were among the chief amusements of an Egyptian party, and were introduced both before and after dinner, which was served up in the middle of the day. Thus Joseph's brethren dined with him "at noon." On their first arrival at a party, lotus flowers and garlands for the head and neck were presented to all the guests, and their heads were anointed with sweet-scented ointments, in token of welcome. Wine was also brought them—at great houses, in a golden or a "silver cup;" and, when all the company were assembled, the master and mistress of the house took their place at one end of the room on a double chair. Men and women either sat together, or in different parts of the room, as convenience or inclination suggested—married people frequently occupying the same

double-chair, or couch; and men and maid-servants were always in attendance to bring round refreshments and newly-cut flowers, both before and after dinner. For those who walked to the house water was brought, in an elegant basin and ewer, for their feet; and washing the hands was always an indispensable preliminary before sitting down to table.

The favourite dishes at an Egyptian dinner consisted of fish, beef, and goose; the ibex, or wild goat, oryx, gazelle, and other antelopes, were also common on the tables of the rich; and partridges, sand-grouse, quails, bustards, wild ducks, teal, and several wading birds included under the name of game, were served up at dinner. The same were offered on the altars of the gods. Vegetables were in great profusion, dressed in a variety of ways, with and without meat. They constituted, as at present, a great part of the food of the higher as well as of the lower classes, and the regrets of the Israelites were expressed as strongly for them as for "the fish" and "the fleshpots of Egypt." Even black-puddings were not only tolerated, but were fashionable; and when the throat of the ox was, as usual, cut nearly from ear to ear, the blood was caught to make a dish which was thought worthy of figuring in the kitchen of King Remeses.* The mode of cutting the throat is still required, by Moslem law, in Egypt; but to eat the blood is unlawful.

It was this custom of the country they had just left that made the Hebrew legislator so often warn the Israelites against eating the blood of animals; for while some of the Mosaic laws were in accordance with the patriarchal habits of their forefathers, many were directly introduced in order to correct abuses they had adopted during their sojourn in Egypt.

The first joint taken off was the foreleg with the shoulder; as was customary with the Jews. It was called the chosen part:

* P. A. of Ancient Egyptians, vol i. p. 175 (woodcut).

and, when the whole had been cut up, the joints were removed to the kitchen, on wooden trays, to be cooked according to the taste of the *chef*. Some were roasted, others boiled, stewed, or broiled, and some of the meat was pounded and minced—doubtless to make those excellent dishes of stuffed vine-leaves, cucumbers, and other forcemeat viands of the East,

(W. 18.)

which might well be introduced into our cuisine.* Like their successors, they employed very simple processes for cooking (as well as for making gold ornaments, and other fine work, such as the Hindoos and other Orientals still produce by

* It is to be hoped that the definition of man, "a cooking animal," does not imply any excellence in the art, or we in England might rank very low in the human scale; but though it is not desirable that men should devote their time to the study of gastronomy, it is of some importance that the poor should at least be enabled to come under the denomination of "cooking animals." "A home" is now, with reason, considered their great want; but when the wife is incapable of providing those "creature comforts," which might make the poor man enjoy his "home," and is unable even to cook a dinner for him on his return from work, he naturally seeks them out of his own house, flies to the excitement of drink (which is rendered doubly injurious by his ordinary beverage being supplied him "on the premises" of the vender), and returns home to ill-treat one whose fault is her inability to be a complete "helpmate for him," from wanting some of the simplest acquirements of a poor man's wife. Those, then, who with charitable feelings so kindly interest themselves in the welfare of the poor, would greatly add to their domestic comforts by enabling girls to learn this useful art,—for *education* does not consist solely of *instruction*; and many learned studies will be found in after-life much less useful than more homely acquirements.

similar means), and some pans of charcoal, or the smallest stove, with a few saucepans and hand-spits, or skewers, and a fan in lieu of bellows, or a contrivance to let fall a little grease, or some flour, upon the joint as it was roasting, sufficed for their kitchen utensils. The same are still thought sufficient by their successors for the production of the twenty or thirty "savoury dishes" of a modern Egyptian table, which our cooks would think the most complicated *batterie de cuisine* insufficient to produce. They had always one great requisite for good cookery—a charcoal fire; and, even if they had known our coal, they would never have subjected a cutlet to its sulphureous fumes, as they would have avoided making coffee or tea with hard water.

The ancient Egyptians, like all Orientals, ate much bread at table; and fancy rolls, or cakes, often sprinkled with sesame, cummin, caraway, or other seeds, were in great abundance at every feast. The bread was sometimes flat, like our girdle-cakes, and made in the same manner, or "on the hearth," on which, when swept clean, the cake of dough was laid, and then covered over with the live charcoal (as in the foregoing woodcut (fig. 2) and as commonly practised by the Arabs), but it was more generally baked in an ordinary oven. All who could afford it had wheaten bread, the poor people alone being satisfied with a coarse kind made of *doora* flour. They ate with their fingers in the Oriental way, knives and forks not being used at table; and water, cooled in porous bottles, or wine, in glass, porcelain, or metal cups, was brought round to those who asked for it. The table was sometimes covered with a cloth, and, in the houses of the rich, each guest had a napkin presented to him by a servant, for wiping his mouth after drinking. They sat on the ground, upon a mat or carpet, around a small table, resembling the *kóorsee* of modern Egypt,

or on stools or chairs; but they never adopted the custom "of reclining at meat," like the Greeks and Romans; with whom, indeed, it was also usual, in old times, to sit, not to recline, at table.

(W. 19.)

Their chairs were frequently made of ebony, or other hard woods, inlaid with ivory (like that at Paris represented in the woodcut), and over the interlaced work of string that formed the seat was a cushion, or coloured covering

made of leather, or of rich stuff, which often extended over the back of the chair. These chairs were generally of the usual size of our own, about one foot two inches high, which, with the back of twenty inches, gave a total height of from

(W. 20.)

two and three-quarters to three feet; but some were low, the seat not being more than eight inches from the ground. Many were on the principle of our camp-stools, with folding legs, sometimes with, sometimes without, a back; the seat being of coloured stuff, painted leather, or the skin of some animal.

The legs were generally made to imitate those of an antelope, a lion, or some other animal; but some were of a purely conventional form, showing more invention than the mere imita-

(W. 21.)

tions of the legs of animals. Both these were adopted also by the Greeks. Others have been found of wood, turned and ornamented with alternate rings of blue glazed ware and

gilding, some of which may have belonged to tables, couches and other pieces of furniture.

Many chairs had arms or solid sides,* which, in the richest fauteuils, were ornamented with the figure of a walking or a crouched lion; and those represented in the tomb of Remeses III. are as remarkable for the elegance of their form, as for the richness of the stuffs forming the seats and back.† Some were without backs, like a couch, and intended for two persons (woodcut 21, fig. 12); and some, like the thrones of the gods, had a very low ridge behind the seat, over which the long end of the cushion was made to fall (fig. 1,6); others had an inflated cushion, which sank down when sat upon, like some of our own in old-fashioned times (fig. 3), and some were in the form of our kangaroo-chairs (fig. 5). A *διφρος*, or double chair, was frequently provided with a back. There were also low square stools, made of palm-sticks; and three-legged stools of wood, or metal, mostly adopted by poor people, when not seated cross-legged on mats, or on the ground (figs. 7, 8, 9). Low benches were also used (figs. 10, 11); and highly ornamented couches and ottomans formed part of the furniture of an Egyptian drawing-room.‡

It is remarkable that the Egyptians should have resembled the Europeans, rather than Orientals, of the present day, in the custom of sitting on chairs; and if they had couches, they were only used like our own, and were not for the purpose of reclining. The floors of many apartments were covered over with mats; and sometimes part of a room, exclusively appropriated to the master of the house and his most distinguished guests, was marked as the post of honour, by having a mat of superior quality; resembling in its patterns those in the modern houses

* See woodcut No. 20, in page 36.

† See P. A. of Ancient Egyptians, vol. i. pp. 60, 61.

‡ See P. A. of Ancient Egyptians, vol. i. pp. 67, 69.

of great people at Cairo, called Menoofee, from the town where they are manufactured (woodcut 20).

Carpets, or rugs, also formed part of the occasional furniture of a house, in cold weather. They were made of coloured woollen thread, with various patterns, as at the present day in the East, or of worsted thread worked with the needle upon linen; and some were entirely of linen, with a raised nap, or long flock, formed of projecting loops of thread. The furniture of their bed-rooms varied according to the wealth, or the choice, of individuals. Their beds were often laid on the ground, upon a mat or carpet; and a wooden stool, precisely similar to that now used in Ethiopia and some other countries, supported their head.* The lofty bedstead was a mark of honour. It was furnished with moveable steps for mounting upon it, as in a European chamber; and the funeral bier, on which the dead reposed, was taken from this the choicest resting-place of the body during life.

The dresses of the Egyptians varied slightly at different seasons; and in winter an outer woollen cloak was thrown over their under garments, which were generally of linen; though cotton might be worn on occasions unconnected with the ceremonies of religion. For funeral purposes linen was always required; and every bandage of a mummy was of that material. Nor could any one enter a temple, or be buried, in a woollen garment.

There was a variety in the form, and colour, as well as the material of their dresses; and even in those of the higher and lower classes, especially of the priests, whose robes of ceremony had a peculiar character; but the under part of the dress was much the same for all, except very poor people.†

Among the peculiarities of the Egyptian costume the most

* See P. A. of Ancient Egyptians, vol. i. p. 71.

† See P. A. of Ancient Egyptians, vol. ii. p. 321 (woodcut).

singular was the wig; which offered gradations as marked as from that of a judge to the bobwig of later times. It was worn by every gentleman; and though it might appear ill-suited to a hot climate, the interlaced texture of the ground to which the hair was fastened, and the protection of this last against the sun, rendered it a most effective, and at the same time the coolest, kind of covering for the head. He was not obliged to have a wig of one particular shape, nor always to wear it; and a priest frequently performed his religious duties with the head uncovered. Some people wore close-fitting caps; and the lower orders often worked with bare heads; which being a custom from their youth, was supposed by Herodotus to account for the hardness of their skulls—a peculiarity very fortunately inherited by their successors, who have many a blow to test it from a tyrannical master. All the Egyptians shaved the head and face, and indeed the whole body; but the same apparent contrariety, which made them place a covering of hair on their shaved head, suggested a false beard; not like the full scrubbery that plants out half the features at the present day, but a conventional twist, whose length and shape depended on the quality of the wearer,—a god's beard being turned up at the end, a king's square, and that of a person of less rank being a short square block. Though the beard seems to have been confined to certain occasions, connected with religious and funeral rites, it was not so with the wig, which might be worn at all times; but women had their own long plaited hair; and a boy, being a sort of neutral animal (like a young woman in German), was permitted to leave a lock or two of hair, to denote his non-arrival at manhood.

Their linen was often of a beautiful texture; and an Egyptian gentleman prided himself on the texture of the dress he wore. He was particular about the transparent fineness of his outer

robe; and this the painters never fail to indicate on the monuments, as well as the waving lines purposely impressed upon it by the *goeffreying* process. Indeed the fineness of Egyptian linen was always celebrated; and some pieces have been found of the most delicate texture, one of which contains no less than 510 (or 270 double) threads in the warp and 110 in the woof, without any appearance of the breaks, knots, or irregularities so common in our modern manufactures. Of such fine thread was the linen corslet of Amasis; each thread of which consisted of 365 fibres. The transparent dresses represented on the monuments were of equally fine quality, though the threads were not so close as in the piece above mentioned, but were apparently of the more open texture of some in the museum of the Louvre. The Egyptian looms were also famed for their fine cotton and woollen fabrics; and many of these were worked with patterns in brilliant colours, which on dresses worn by women were very varied. They were mostly worked with the needle, but some were woven in the piece. Of these last were the linen and cotton fabrics with blue borders; the threads having been previously dyed with indigo; and stripes, or some other simple devices, were generally put into the stuff on the loom. Some of the stripes were of gold thread, alternating with red lines as a border. It was also usual to embroider patterns in the staircase-style, common in our worsted work; and some were made out with long stitches, that laid down the figures, or devices on the surface. Some of these are in the Louvre (woodcut, 22). They are mostly cotton; and though their date is uncertain, they suffice to show that the manufacture was Egyptian; and the many dresses painted on the monuments of the eighteenth dynasty show that the most varied patterns were used by the Egyptians more than 3000 years ago, as they were at a

later period by the Babylonians, who became noted for their needlework.

(W. 23.)

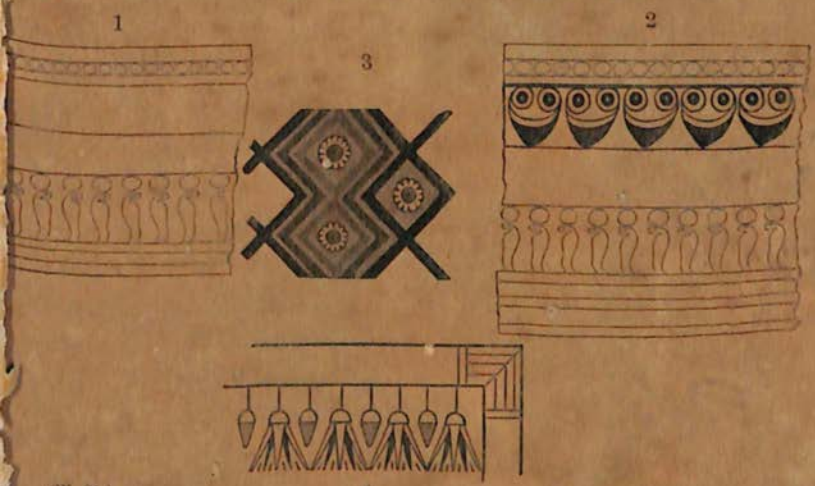
The Egyptians had also the secret of dyeing cloths of various colours by means of mordants,—a fact satisfactorily proved by the very manner in which Pliny describes a process which he

(W. 22.) DRESS WORKED IN COLOURS.

evidently did not understand; as the strongest evidence of the circumnavigation of Africa, by the Phœnician sailors sent by Necho, is derived from the very doubts of Herodotus respecting the sun setting, at one part of the voyage on their right, at the other on their left, hand.

The Egyptians were equally fond of variety of patterns on the walls and ceilings of their houses and tombs, as on hangings and furniture; and some of the oldest ceilings, as at a tomb near Osioót, show that the chevron (so common in Egyptian baskets and vases) together with the chequer, as well as the scroll and guilloche, ascribed too hastily to the comparatively modern Greeks, were adopted in Egypt more than 2000 years before our era (woodcut 23).

An infinite variety of purely *conventional* devices had been invented, and were in common use during the eighteenth and

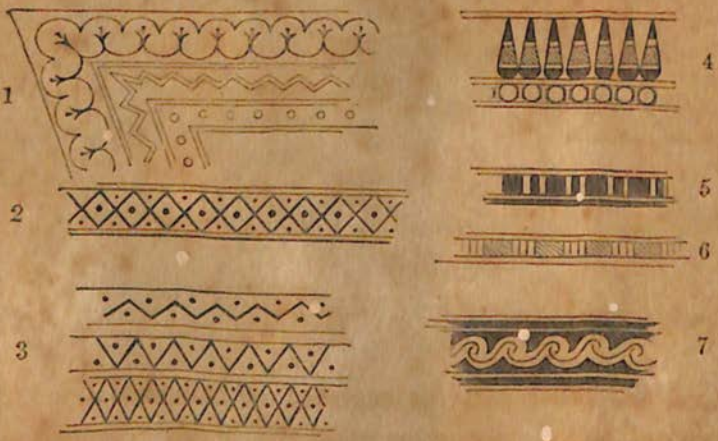


(W. 24.)

nineteenth dynasties, long before the Trojan war, *as well as* the lotus and other ornaments, directly imitated from natural

objects; which show that the Egyptians were, like that highly-gifted people, the Greeks, aware of the propriety of fancy devices for decorative purposes. These last in fact were almost always introduced upon their painted ceilings; except in temples, where gold or white stars on a blue ground represented the heavens, and vultures holding in their claws the royal flabellas borne over the Pharaohs on state occasions (as the eagle of Greece held the thunderbolt of Jupiter), hovered over the passages through which the king passed to the interior of the building.

Indeed, we perceive the gradual progress made by the Egyptians in this choice of fancy ornament; for, having begun with simple imitations of real objects, as the lotus and other flowers, they by degrees adopted conventional representations of them, or purely imaginary devices; and it is worthy of remark that the oldest Greek and Etruscan vases have almost as close an imitation of the lotus and other real objects, used in early Egyptian ornament, as are found on the old monuments of Thebes. This is also



(W. 25.)

one of the many proofs of the early centre from which ornamental art advanced, and forms one of the interesting links in

the history of its origin and progress. The same scroll, chevron, and other patterns, common on Greek vases, had also been introduced long before on those of Egypt; whole ceilings are covered with them, and the vases themselves had frequently the same elegant forms we admire in the cylix and others afterwards made in Greece. They were of gold and silver, with the

(W. 26.)

scroll and other patterns engraved or embossed upon them. Some of large dimensions were also highly ornamented, and those made of porcelain were rich in colour. Some had the handles and lids ornamented with the heads of animals; and as many of these, as well as the graceful ones above mentioned,

are borne in procession as part of the tribute of Asiatic nations, it is reasonable to suppose that these last had vases of the same form and pattern; and it may even be a question whether Asia borrowed the original designs from Egypt, or Egypt from Asia. Some were in the form of jugs, also of gold and silver, and one represented in the tomb of King Remeses III. is remarkable from having cows' heads and rosettes, which remind us of Greek ornaments common in the metopes of Doric temples.* A jug without a handle was used for holding ointment at a party (woodcut 29, fig. 1); where vases of numerous forms were used for various purposes; and some raised on stands appear to have held water, reminding us of the stone water-jars at the feast of Cana (figs. 2, 3).

(W. 27.)

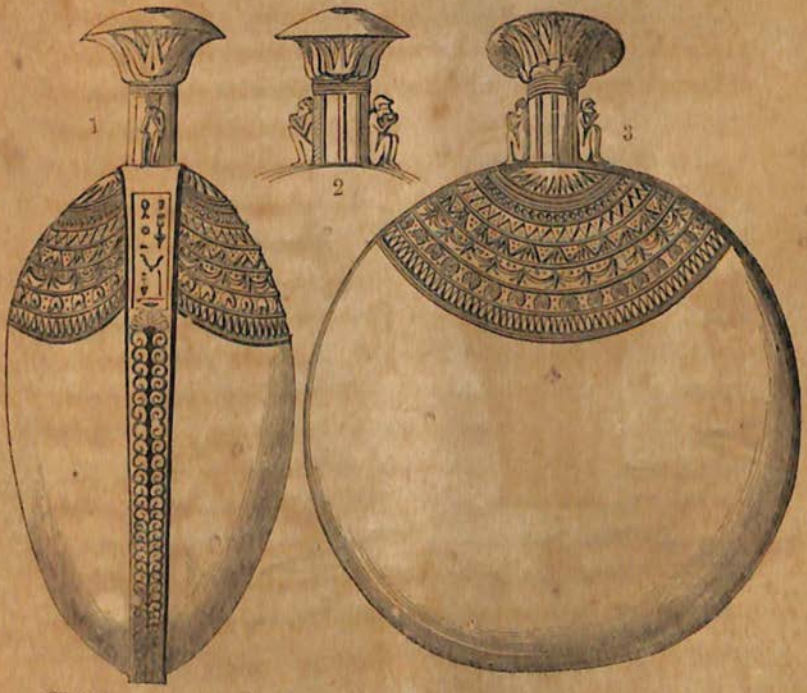
(W. 28.)

Among the many represented and found in the tombs, one which is peculiarly Egyptian, though quaint, has a graceful character, and is remarkable for the variety and taste

* P. A. of Ancient Egyptians, vol. i. p. 154.

of its patterns. The neck is ornamented with blossoms of water-plants, and on each side of it sits a monkey. The devices at the front and back are arranged in the manner of a necklace, and below the legend on the side relating to the Deities, Pthah and Pasht (Vulcan and Bubastis or Diana), is a not inelegant ornament. These vases or bottles are generally of glazed pottery, sometimes partly vitrified; and they probably derived their shape from the calabash so common in Africa (woodcut 30).

(W. 29.)



(W. 30.)

The Egyptians do not appear to have had any vases in imitation of skins, occasionally found in Greece; and if the remark of Pasiteles quoted by Pliny, that pottery was the parent of the arts, both in stone and metal, is correct in regard to Greece, it applies equally to Egypt. It must, however, be observed that when art has so far advanced as to keep the styles of pottery, stone, and metal vases distinct, it is an error to copy exactly any one of them in the material of the other; and a certain difference is required in the form and treatment of each conventional object, according as it is to be of metal, glass, pottery, stone, or other dissimilar substance. In some instances the peculiar form may be suited to more than one material, and the Greeks and Etruscans have copied some metal vases, with success, in earthenware; though the early Greek potters only find an excuse for their imitation of basket-work in their rude jars, from the want of taste in a primitive age.

Some Egyptian vases in gold and silver were richly inlaid or studded with precious stones, and like their bracelets and other articles of jewellery were enamelled in brilliant colours. For, though in most of these, the vitrified substances were inlaid in the metal, previously chiselled out to receive them, one instance of real enamel has been found; and this remark of Pliny, "the Egyptians paint their silver cups, representing Anubis upon them; the metal being painted—not engraved—" seems to point out enamel in contradistinction to the ordinary inlaid work. It is true he speaks of the silver having an alloy of copper and sulphur; but Pliny seldom understood the processes by which the effects he describes were produced.

The glass and porcelain cups were equally varied, and the use of glass was known in Egypt at a most remote age, as I shall have occasion to show in mentioning the trade of glass-blowers. Among the most beautiful productions of this manufacture were

their richly coloured bottles with waving lines; and their small inlaid mosaics. In these last the most delicate designs were made; and such was the fineness of the work that it must have required a strong magnifying power to put the parts together, as it now does to examine them; particularly the feathers of birds, the hair, and other intricate details. They were composed of the finest threads or rods of glass (attenuated by drawing them, when heated, to a great length) which, having been selected according to their colour, were placed upright side by side, as in an ordinary mosaic, in sufficient number to form a portion of the intended picture. Others were then added until the whole had been composed; and when they had all been cemented together by a proper heat, the work was completed. Slices were then sawn off transversely, as in our Tunbridge ware; and each section presented the same picture on its upper and under side.

The coloured bottles were of a composition which has not been improperly called glass-porcelain. They are represented in the old paintings, and many have been found in the tombs.

(W. 31.)

The colours often passed directly through the fused substance, and that this was a recommendation in the sale is shown by an imitation of it being sometimes made either to content the purchaser at a lower price, or to deceive him by appearance of reality. They were generally in the form of bottles, cups, and small bowls, or saucers. The difficulty of making them, and finishing those of the finest quality, without accident, is even alluded to by old writers; and we may readily believe the manufacturers "often lost their labour" in applying the last colours, and in adding the handles and other parts of those delicate objects. They were probably the false Murrhine vases

of antiquity, which, at first made to imitate the varied hues of a rare stone, were soon carried to such perfection

(W. 32.)

(W. 33.)

that they almost entirely superseded its use, so that no fragment of a vase of the real Murrhine stone has yet been found. It was probably what we know in England as Derbyshire spar.

Glass was also cast, engraved, ground, and cut; and precious stones were imitated successfully in that substance.

Though many Egyptian vases were of very elegant shape, others were as deficient in form and proportion as some now made in Europe and in China. Nor is this extraordinary, when we see that even the talented Greeks sometimes failed, particularly in the handles and the footstalk of their vases, and many of the later vases, called Apulian, though remarkable for their size and the elaborate designs painted on them, are as elongated, in defiance of all symmetry, as many of the glass bottles and vases of Bohemia.

As it is interesting to compare the taste of different people,

and to trace its progress at various periods, it may not be out of place to introduce some of the most ordinary forms of

(W. 34.)

vases and utensils made of glass, stone, and other materials used in Egypt.*

Many are figured in the paintings; † and the oldest shapes

* See others in Popular Account of Ancient Egyptians, vol. i. pp. 149—158, and vol. ii. pp. 77—80).

† See woodcut 34.

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(W. 35 a.)

in vogue during the fourth and other early dynasties continued to be common to a late time.

Alabaster was a material much used for vases; and as ointment was generally kept in "an alabaster box," the Greeks and Romans applied the name "*alabastron*" to all vases employed for that purpose; and one of them found at Thebes, and now in the museum of Alnwick Castle, contains some

ointment, perfectly preserved; though from the Queen's name in the hieroglyphics, it is more than 3000 years old.*

(W. 36.) 1 2 3

Another of these vases (fig. 1) appears to have contained a liquid, and is remarkable from having "25 *Hin*" written upon it, accompanied by the sign of "measure." It would contain about two gallons, or rather more; so that this *hin*, if really a measure, differed from that of the Jews, which was equal to one gallon and a half. Another, with the same word *hin* has also been found, of alabaster; but I am not certain about the quantity it may have contained (fig. 3).

Bottles and cups were also made of hard stone, as granite, porphyry, and basalt; and some both of alabaster and hard stone have been found in the form of shells, geese, and animals; but those cups, commonly used for offerings to the gods (woodcut 35, fig. 15), were of very simple shape, as were many of the *Rhytons*, or drinking cups, some of which were ornamented with flowers and other devices. Many were of earthenware

* P. A. of Ancient Egyptians, vol. i. p. 157, woodcut 171, fig. 1.

and of vitrified pottery; and one is curiously made with an outer casing round a small nucleus forming the bottle itself,

(W. 37.)

which last appears to have been turned before the ornamental exterior was placed round it (woodcut 38, fig. 2).

Glazed earthenware cups, or bowls, were often ornamented with various patterns; some having fish and lotus blossoms

(W. 38.)

on the concave bottom, which appeared to float in the water

(W. 39.)

poured over them; and some were in the form of these favourite

(W. 40.)

flowers.* Earthenware bottles were very varied in form. Some

(W. 41.)

* P. A. of Ancient Egyptians, vol. i. p. 180 (woodcut).

(W. 42.)

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were double; others, in the form of animals or of women, were made to suit some caprice or to amuse a child (woodcut 42); and many were *painted* in various ways, with rings, flowers, and other devices (woodcut 41).

Vases of metal were not less varied in shape. Those of gold and silver have been already mentioned, and bronze vessels are frequently found in the tombs and figured on the monuments. A table of this last metal was found at Thebes, on which were about twenty of different forms (represented in woodcut 43, where some of the principal ones have been drawn on a larger scale). Among them is a sort of small portable sink (fig. 7), and one of those neatly-made strainers which were also used by the Greeks, Romans, and Etruscans (figs. 3, 3*a*), and which show how wisely they extended their taste to the most ordinary utensils of common life. Fig. 8 gives the form of the top of the table.

Some of the bronze vases were ornamented with the favourite lotus flower, either as a handle or in the devices carved upon

(W. 44.) 1

2

them; some were of simple shape, with a lip formed for pouring conveniently from it; and some that held water for

the service of the temple were ornamented with figures and hieroglyphics, sculptured in intaglio or relief upon the exterior (woodcut 44, fig. 1).

The quality and the workmanship of the vases, of whatever material they might be, varied of course according to the taste or the wealth of those to whom they belonged; and the same difference was observable in the ornamental furniture, and in the decoration and dimensions of their houses.

The wealthy part of the community, consisting mostly of the military and priestly classes, had large town houses and spacious villas; and their extensive gardens were laid out with every attention to taste, and ornamented with numerous beautiful plants. Avenues of trees shaded the walks, and a plentiful supply of water was always kept in large tanks, cased with stone and furnished with flights of steps, to enable them to reach the water when low, and to clean out the tanks when

empty. The water when required for irrigation was sometimes raised with the pole and bucket (the modern *Shadóof* of Egypt),* and was conducted by small channels to various parts of the garden, as was the custom in the fields; but the flower-beds were generally watered by means of buckets or earthenware jars, attached to a wooden yoke borne on men's shoulders—a method common to water-carriers and milk-maids in this country, and one which was very frequently adopted by the Egyptians even for carrying heavy burthens† (woodcut 45). This was always the method used for watering choice plants; which were often placed in rows in red earthenware flower-pots, in colour and rude form exactly like our own; but the beds were laid out in squares for the convenience of irrigation, as in a modern Egyptian garden, and were very similar to our salt-pans. One of the best illustrations of this kind of garden is in a tomb at El Bersheh, of the early time of the Osirtasens of the twelfth dynasty, and the same in which the Colossus on a sledge is represented (woodcut 45).

The flower-garden was one of the most important features of the pleasure-grounds; for the Egyptians took the greatest delight in the cultivation of flowers, and the great variety they succeeded in raising is mentioned by more than one ancient writer. Athenæus attributes this to the nature of the climate, as well as to the skill of their gardeners; and "while other countries produced them only in small quantities at any season, Egypt had at all times of the year the greatest abundance, and roses, violets, and other flowers were always to be had, even in winter." Such, too, was the fondness of the Egyptians for flowers, that they were not satisfied with the abundance produced by nature, and artificial flowers were invented by them, which thence received of old the name "Egyptian."

* P. A. of Ancient Egyptians, vol. i. p. 35; vol. ii. p. 4.

† Ibid. vol. i. p. 33 (woodcut 36).

Separate portions of the garden were appropriated to particular productions. The vineyard occupied a large space; the orchard containing sycamore and other fig-trees, olives, pomegranates, dates, and various fruit-trees, was also extensive. The vines were trained on trellis-work, often in the form of bowers; as they still are in the modern gardens of Upper Egypt, where the intermediate spaces between the main rafters are traversed by strong reeds fastened with string to the wooden framework. The same was evidently the mode of construction of old; but the rafters were then mostly supported on forked poles; and, being of moderate height, afforded great facility for plucking the grapes.

The fruit-trees were standards, as usual in hot climates; and in gathering the figs from the large sycamores, boys were employed to climb the upper part of the tree, while men standing on the ground collected the fruit from the lower branches, which in the sycamore grows in great numbers upon the wood itself.

They were sometimes assisted by monkeys, trained for the purpose; which is one of many proofs of the skill of the Egyptians in taming animals, and teaching them to conform to habits totally at variance with their nature; for though these monkeys occasionally helped themselves to a tempting fig, it required more than ordinary ingenuity to teach them to assist at all in so delicate and tantalising an occupation.

When gathered, the fruit was carefully covered with leaves, and placed in the shade till sent home; and the flat baskets of that day were similar to those now used in Egypt for the same purpose.

The wine-press was frequently in or near the vineyard; and, like the whole garden, was under the protection of the "good

* P. A. of Ancient Egyptians, vol. ii., frontispiece.

(W. 46.)

Particular kind of Wine-press; the *Torcular* of the Romans.

genius," typified by an asp, the emblem of the ram-headed god *Nou;* which snake was indebted for its divine character to its utility in killing rats, and other vermin hurtful to gardens, and like some other sacred animals, derived its ideal reputation from the real benefits it unconsciously conferred.

The grapes were trodden by the feet; but they were sometimes subjected to another process of twisting in a bag; and some other liquid seems afterwards to have been added, which, having been stirred round (woodcut 46, fig. 7), was poured through a piece of fine cloth into a vase (fig. 5) placed below for this purpose. The presence of a man (fig. 2), holding what seems to be an egg in his hand, may also indicate its use for clarifying the wine.

The flower-garden was placed conveniently near to the house to enable the master and his friends to walk through the shady avenues that traversed it, and to receive the morning offering of bouquets from his attendants without exposure to the sun. Adjoining it was frequently a piece of water fed by a canal from the Nile, on which they amused themselves by angling or spearing fish; and the canal communicating with the river enabled them to pass during the inundation in their "painted boats" into the Nile itself.

The house, its offices, and the gardens, were variously laid out; and, as the Egyptians were averse to great uniformity, the two wings of a villa were always different. The courts and windows were either supported on columns, or shaded with trees; coolness in that climate being the great desideratum; and the rooms were generally placed round an open court, or opened on a corridor, at the end of which were the staircases leading to the upper chambers. The house consisted generally of a ground-floor, and one upper story; and even in the towns, few exceeded two or three floors above the basement story. These, too, were often built, where the

space would permit, round an open court; in the centre of which was a fountain or a small garden; or with the rooms of the ground-floor opening on a court, or a covered corridor; and large houses had a porch of two or more columns, occasionally with a flight of steps, before the street-door. Above, or on the lintel of this, was painted the name of the owner, or a sentence of good omen,* which was doubtless put up at the dedication of the house,—a ceremony adopted also by the Jews.

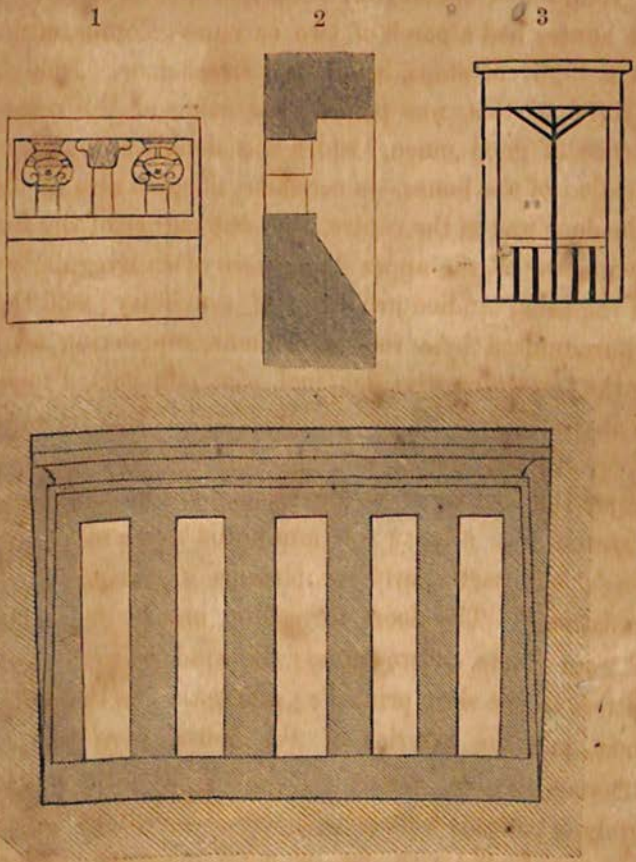
The door was in the centre, or at one corner of the front, and the windows of the upper floors were often irregularly placed, with the usual studied avoidance of symmetry; and the whole was surmounted by a row of columns, supporting an awning over the terrace on the flat roof. In one part a tower often rose above the rest of the building, and it was on the top of this, or on the terrace, that they slept during the hot weather, to enjoy the cool air of an Egyptian night at that season, and to escape the attacks of musquitos, generally numerous enough, but particularly troublesome in autumn during the inundation.† The doors turned on bronze or wooden pins and were of one or two valves; the windows were closed with shutters on the same principle; and both, like the walls of the rooms, and the exterior of the house, were painted with numerous devices, among which the favourite lotus and a variety of patterns were conspicuous. Sometimes the windows were ornamented with one or more columns, dividing them into several lights; some had simple stone mullions, occasionally with transoms, and the same kind of window, with stone pillars, or mullions, was used in the large avenues, and side chambers of the temples (see woodcuts 48 and 110).

Light was also admitted into the chambers and corridors of

* See P. A. of Ancient Egyptians, vol. i. p. 7 (woodcut).

† See P. A. of Ancient Egyptians, vol. i. p. 9 (woodcut).

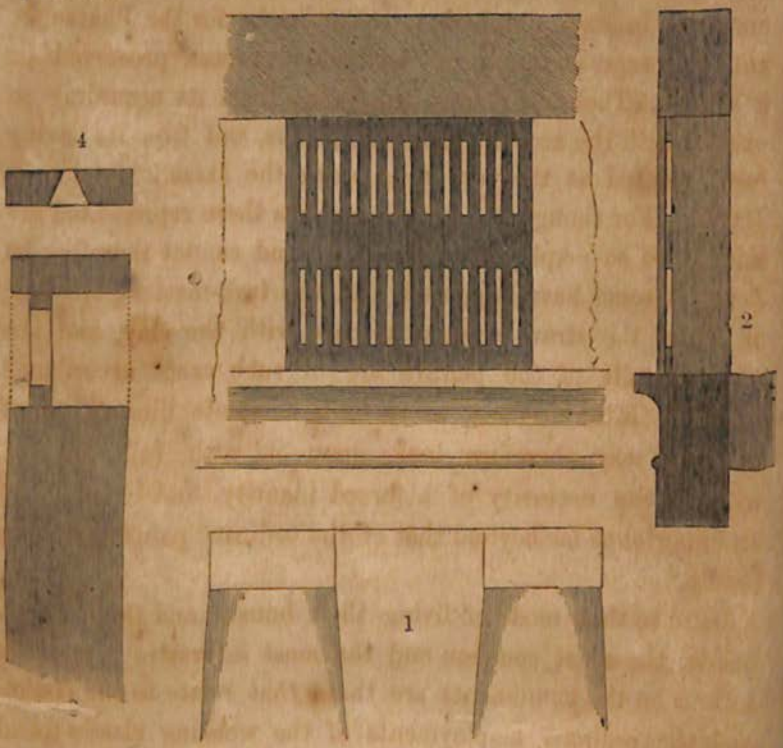
temples by windows in the roof, which was the chief mode of lighting those buildings. They were small square or oblong



(W. 47.)

holes splaying inwards, (woodcut 48, fig. 4); and the side-windows were often of the same kind, the exterior opening not being a foot square. The few windows introduced into the side-walls of temples were about three feet in breadth, half of which was occupied by the bars or mullions. They splayed inwards; and were generally recessed (fig. 3); or of such a

thickness that, while the light was admitted, little sun could penetrate into the building.



(W. 48.)

The houses were of crude brick, stone being chiefly confined to sacred edifices; and some of the rooms were vaulted, as were the granaries. For the arch, as I shall have occasion to show, was of very early invention in Egypt, and was commonly introduced in the tombs, at least as early as the sixteenth century before our era, or 3400 years ago.

The use of bricks baked in the sun was universal throughout the country; and the government, taking advantage of the general want, secured a monopoly of them; so that bricks without an official stamp of the king, or of some licensed

authority, could neither be made nor sold. It was on this account that the Jews, and various captives taken in war, were employed in such numbers to make bricks for the Pharaohs; and the representation of the whole process preserved in a tomb at Thebes is doubly interesting from its according so exactly with the account given in Exodus, and from its having been painted at the very time when the Israelites were in Egypt. For though the Asiatic captives there represented are said to be so employed "at Thebes," and cannot therefore be Jews, as some have supposed, still the task-masters, the tale of bricks, the straw brought to mix with the clay, and the whole details of the picture are in such exact accordance with the Bible account, as to be a complete illustration of it. We may therefore look upon it with full interest, without the necessity of a forced identity, and claim for it an importance far beyond that of the ordinary paintings in the tombs.*

Next to their mode of living, their houses, and their amusements, the most common and the most interesting representations on the monuments are those that relate to the trades and the ordinary employments of the working classes; and though a great number of these (as may be reasonably expected) are unnoticed, there is sufficient to enable us to obtain an insight into their most usual occupations. Among those that occur most frequently in the paintings of the tombs, are agricultural pursuits, rearing cattle, fishing and fowling scenes, potters, glass-blowers, gold-workers, weavers, dyers, mat-makers, carpenters, and cabinet-makers, boat-builders, chariot-makers, undertakers, leather-cutters, sculptors, painters, public scribes and weighers, and some others. These, with the amusements of their private life already mentioned, present a

* See P. A. of Ancient Egyptians, vol. ii. p. 196 (woodcut).

sort of epitome of man's life and actions, and are the principal subjects in the tombs, together with the funeral rites and other ceremonies relating exclusively to the deceased.

It is singular that, among the many painted there, some of the most important occupations and discoveries are entirely omitted; and were it not for the results that remain to bear witness of them, we should have had no proof of their having been known to them. One of these is the method they employed for transporting and raising the enormous blocks of stone that have excited so much surprise in ancient and modern times, and of which no satisfactory representation is found on the monuments. We have, indeed, abundant evidence of it; but there is no indication of the mode of hewing such a mass as the colossus of Remeses II., nor of the mode of transporting this weight of 887 tons to Thebes; and except the smaller limestone blocks, carried on sledges drawn by oxen from the quarries of El Mahsara, and the colossus of El Bersheh,* said in the hieroglyphics to be thirteen cubits (or about twenty feet) high, which is represented on a sledge dragged by the force of men's arms, we have no information from the sculptures respecting the mechanism they employed for moving, and still less for raising, great weights. We may admire the skill required for conveying the granite colossus of Remeses from the quarries of the first cataracts to Thebes, a distance of more than 130 miles; but if the measurements of the monolith of Buto given by Herodotus are even an approximation to the truth, the transport of that monument from the same quarries to the Delta is far beyond any other attempt with which we are acquainted, as it could not have weighed less than five thousand tons.

Similar omissions of other common processes and customs are

* P. A. of Ancient Egyptians, vol. ii. (frontispiece).

equally inexplicable,—and many animals and productions of Egypt are also unnoticed.

It is also curious to observe how near the Egyptians approached, without actually arriving at, some later invention. Thus though they stamped metal, and used carved seals and cylinders of gold, or stone, for sealing the clay fixed to documents, as early as the fourth and twelfth dynasties, they never relieved themselves from the inconvenience of weighing every ring of gold or silver spent in purchases at the market, and never hit on the expedient of coinage; and the numerous

(W. 49.)

impressions of the dies they employed for stamping leather and other substances, never suggested the idea of moveable types. Impressions of seals on clay, marked also by the fibres of the cloth or of the papyrus they were attached to, and

bearing the name of Thothmes III., are not uncommon; which, with some of a still older date, show how erroneous it is to cite those from Nineveh for great antiquity, or as a proof of the early use of clay seals. And there is one of hard stone in the museum at Alnwick Castle, which is of the remote age of Osirtasen, more than 2000 years before our era (woodcut 49, figs. 5, 6). Besides those used as seals, are others very like our modern butter-moulds, with birds and various fanciful forms; and at the side are notches in the stone, to let off the liquid matter pressed between the two matrices of the mould (fig. 7.)

In a country so remarkable for the fertility of its soil, and which depended so much on the promotion of agriculture, it is reasonable to suppose that the pursuits of the peasant would hold a prominent place in the paintings that illustrate its customs; and all the different scenes connected with the tillage of the land, and the harvest, are frequently represented, —as ploughing, hoeing, sowing, cutting the corn, gleaning, threshing, and winnowing; as well as collecting, carrying, and housing the grain.

Every estate had several stewards, who superintended the cultivation of the land, the rearing of cattle, and other farming operations; and the owner of the property frequently went himself to watch the labours of the peasantry, sometimes in a chariot drawn by two horses, or more rarely by two mules; and sometimes on foot, accompanied by his favourite dog.

The plough was of the simplest construction,—all that was required being to make light furrows in the soil, which, restored annually by the fertilising mud of the inundation, wanted no top-dressing, subsoiling, or artificial appliances; and though nitre and the *guano* of the pigeon-house were occasionally used, as by the modern Egyptians, for water-melons and some other produce, nothing of the kind was required for the productions

A singular representation of men drawing the Plough. Fig. 2 throws the seed broadcast, figs. 5, 6 are hoeing, and fig. 7 represents cattle, probably belonging to another plough. It is part of the same subject as woodcut 51, of which it forms the lowest line.

connected with the necessary food of man; and very little variety in the crops grown on the same field sufficed to prevent the land being impoverished or run out. They frequently dispensed with the use of the plough, and then merely dragged the wet mud with bushes, before throwing in the seed, which was sown broadcast. The plough was drawn by two oxen, sometimes yoked by the neck, sometimes by the horns; and one instance occurs of it drawn by men, showing that the breaking up of the surface was alone required; which might be aptly described by the Roman term "scarification." This singular and interesting subject (now in the Louvre) is shown by its style to be from a Theban tomb of the eighteenth, or the beginning of the nineteenth dynasty; and it forms part of the same agricultural scene with the succeeding woodcut.

The wheat was cut with a toothed sickle, a short way below the ear, and was then carried in coarse nets to the threshing-floor; but the *doora* (or *holcus sorghum*) was plucked up by the roots, and, when the earth had been beaten off with the hand, was tied up in bundles or small sheaves, the grain on its round head being afterwards stripped off by an instrument furnished with three or four prongs, through which it was forcibly drawn.

Their mode of threshing was with oxen, which, driven over the corn strewed upon the hard ground, or on a paved floor, trod out the grain; as they still do in Italy, Spain, and some other countries; and the ox was "unmuzzled," as with the Jews. The grain was then winnowed; and having been piled up in great heaps, was carried off in baskets to the granary; one teller being employed, with the usual caution of the Egyptians, to note down the number of measures removed, and another to verify the quantity on their arrival at the granary.

Great attention was paid to the rearing of cattle and sheep; and many wild animals, as the gazelle, the ibex or wild goat,

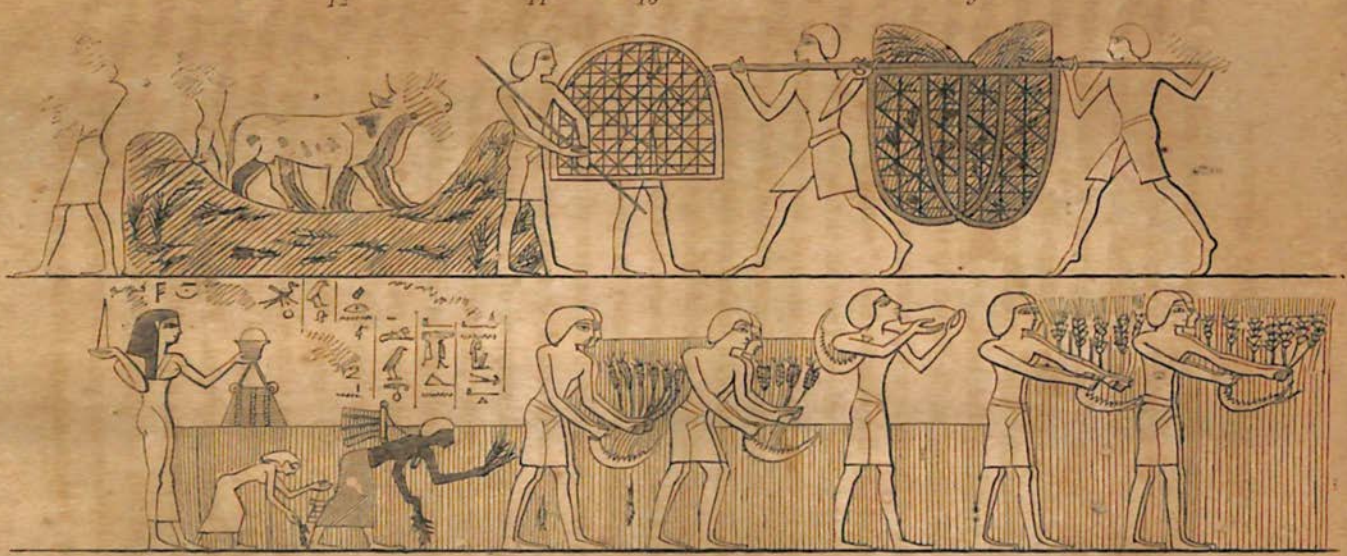


Fig. 1 brings refreshments for the labourers; 2, 3, gleaners, 3 being a black woman; 9 carrying the ears to the threshing-floor; 10 man returning with an empty basket made of a network of rope; 11 an overseer; 12 treading out the grain by oxen.

and the oryx, formed part of the stock of the farmyard. All these last were bred in considerable numbers; and supplies were constantly added whenever the huntsmen could catch them young in the deserts, where they abounded. We are informed by the paintings, and the accounts of old writers, that experience had imparted to them many useful secrets in taming and training animals and birds; and if lions were taught to perform the part of hounds, and of the *chita* or hunting leopard of India,—if cats could be made retrievers in fowling excursions among the fens, and snakes were charmed (as they still are in the East),—if monkeys helped to gather fruit, and if crocodiles could be taught to come out of the water when called by name, and submitted, like young ladies, to have their ears bored for the display of an ornament, we must allow that our modern Van Amburghs fall far short of the Egyptians. But, even admitting that much of their reputed skill was exaggerated, there can be little doubt that they studied the habits of animals with great success; and the veterinary art was well understood.

Indeed, to northern people, more prone to destroy than to tame wild animals, the regard so often shown them by Orientals may often appear strange and inconsistent; but though none are more fond of field sports than Asiatics (as they and the chase-loving people of Egypt were of old), they do not kill animals from a mere habit. Storks and doves are permitted by the Oriental to appropriate whatever part of his house may please them, even if it inconveniences the owner; and the gulls and porpoises in the Golden Horn are so accustomed to be unmolested, that they scarcely make way for the oar as it dips in the water; and yet the Turks have not the credit of being the meekest, or the most humane, of men. What European boy or man, who could reach a stone or a gun, would fail to indulge in such an opportunity for destroying? And, with all our

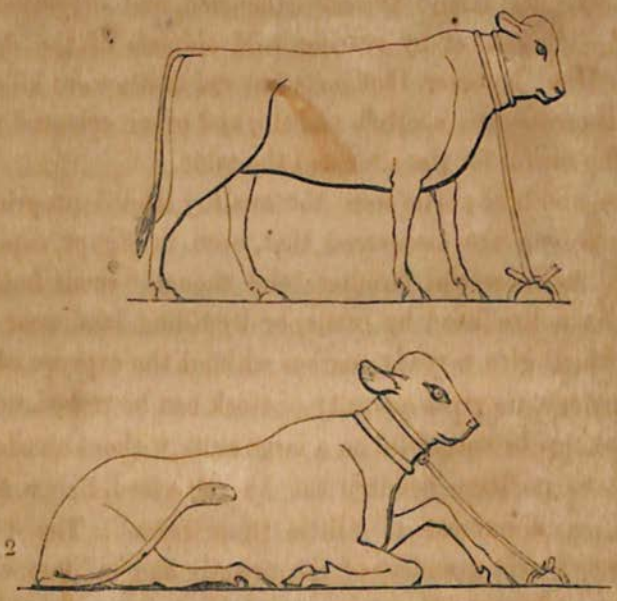
vaunted love of the horse, where is that animal treated as at an Arab's tent? We are *proud* of our horses, rather than *fond* of them. A man shows the hunters that have carried him, more impressed with their worth and excellence than with a feeling of attachment to them. Few horses indeed know and welcome their masters as they do in the East; and if the master were to use that constant kindness which endears him to the animal, his groom would scarcely fail to counteract the unusual interference by vulgar violence.

Not only was the artificial hatching of eggs an invention of the ancient Egyptians, but the treatment of sick animals is among the subjects of their paintings, executed nearly 4000 years ago: and Cuvier found incontestable proof that the fractured bone of an ibis had been set by them, while the bird was still alive.

Their cattle grazed in the fields; and, when the inundation was rising, great care was required lest, being left too long, a sudden increase of the water might endanger their safety, particularly in the low lands and in the Delta. This last afforded the chief grazing country long before a part of it, "the land of Goshen," was mentioned as the best place for cattle; as it did when that district received the later name of Bucolia; and as it does at the present day. Rescuing the cattle from the water on those occasions is one of the subjects represented at Beni Hassan;* and the same scene is often now witnessed in the Delta during the high Nile. When intended to be fattened, the cattle were taken up and fed in stalls,—a custom which the mention of the "fatted calf" and the "stalled ox" shows to have been common also with the Jews. They consisted of several varieties, as in those modern countries where the rearing of cattle has long been attended to; the

* See P. A. of Ancient Egyptians, vol. ii. p. 6, 7 (woodcut 357, and vignette), at the head of chapter viii.

most common being long-horned breeds, some of which were even imported from Ethiopia. "Short-horns," too, were favour-



(W. 52.)

ites of the Egyptian farmer at the earliest times, as well as a polled breed (woodcut 52).

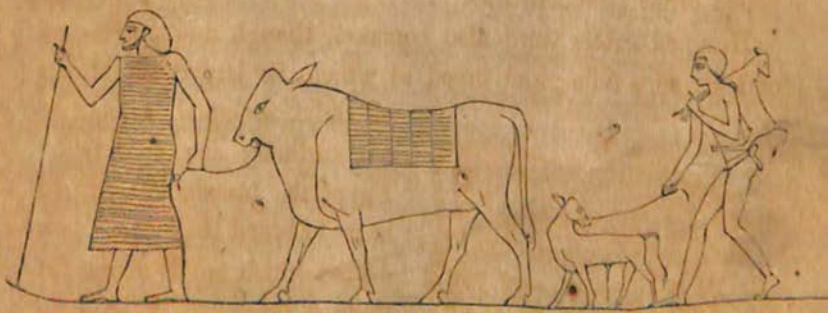
Humped cattle were also common, though now only found on the upper Nile; one breed of which, far larger than those of India, is equal in size to our ordinary cows; and the Egyptian breeders seem to have fattened their cattle to a degree which might obtain for them a prize, or at least be "highly commended" at one of our modern cattle shows.

(W. 53.)

The care they took in breeding stock—like the religious

regulations, which, in order to prevent the slaughtering of cows, made them sacred—originated in a prudent fear lest their supply of cattle should become exhausted, and suggested the idea of adding to it by rearing wild animals of the desert. The assertion, however, that none but red cattle were killed in Egypt is erroneous; spotted, piebald, and other coloured varieties being lawful for the altar and the table.

Those who bred cattle were the wealthy landed proprietors; for it was long ago discovered that, even in Egypt, capital is required for successful farming; and though "small holders" may gain a livelihood by cattle, or by tilling land near large towns which give a ready market without the expense of long land carriage, no great quantity of stock can be reared, nor any undertakings be successful on a large scale, without an adequate outlay; as no large country can be cultivated, like a market garden, by a number of "little proprietors." The wealthy landowners were grandees of the priestly and military classes; but those who tended cattle were looked down upon by the rest of the community. "Every shepherd was an abomination to the Egyptians," both from his employment, and from the



(W. 54.)

recollection of the foreign Pastor Kings who had tyrannised over Egypt; and this contempt is often shown by the paintings

representing them unshaven, and squalid in appearance, and dressed in the same covering of mats that were thrown over the beasts they tended. Some were even figured as stunted or deformed; and such was the aversion felt towards swineherds, the lowest of this class, that no others would intermarry with them. But the contempt of others did not prevent herdsmen from taking care of themselves; and, with the usual caution of Egyptians, they tied a cow's legs while milking her. The office was performed by men, as at the present day among the Ababdeh Arabs, who even think it disgraceful for a woman to milk any animal.

Fowling and fishing scenes are among the most usual subjects in the paintings; and not only those who gained a livelihood thereby, but priests and others of rank took delight in chasing the numerous wild fowl of the marsh lands, in angling and spearing fish, and in hunting the beasts of the desert. Birds were felled with the throwstick, a weapon of hard wood, about one foot six inches long, slightly curved, with a sharp edge on either side, in order to offer less resistance to the air, like the *boomarang;* though the Egyptian throwstick was less curved, and had not the same extraordinary power of returning to the thrower, as the Australian weapon.

Fish were killed with the double or single spear; and a gentleman was generally accompanied by many attendants, as well as by his children, who assisted in the sport. For the Egyptians never failed to show that great fondness for their children for which they were remarkable; and the most consequential pontiff did not affect indifference to those feelings which are natural to man, nor pretend that his religious occupations obliged him to disregard the affectionate duties of a husband or a parent.

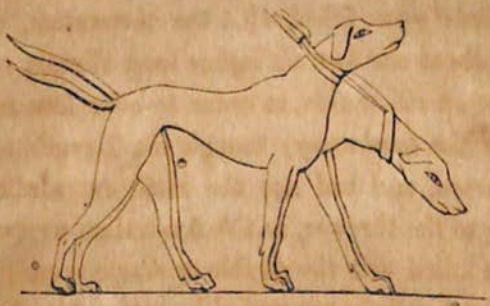
In the chase of wild animals of the desert they used the bow,

the spear, and even the lasso; but more generally the first of these; and the chasseur either shot on foot, or in his chariot, in some chosen spot, previously enclosed with nets, into which his beaters had driven the game.

They also coursed with dogs, which were taken to the ground

(W. 55.)

in slips, and loosed upon the game as opportunity offered; and no pains were spared to breed and train hounds for this sport,



(W. 56.)

some of which were exported even from Ethiopia. They had many breeds of dogs; and such was their fondness for them that an Egyptian was always accompanied by his dog, both in the house and in his walks. The same caprice too seems to have guided their taste in the selection of pets, as in modern days; many were admired for the beauty of their extreme ugliness; and a certain breed was fashionable at different times.

1

2

3

What may be called the Suphis breed, with a pointed nose,

(W. 58.)

prick ears, and a closely-curled tail, was the particular favourite

(W. 59.)

during the reigns of the pyramid kings; and the veriest turn-

(W. 60.)

spit was fashionable in the days of the Osirtasens. But the "King Suphis breed" enjoyed the most lasting favour in Egypt;

and a spotted variety of it shared the admiration of great men, even at the court of the Osirtasens (woodcut 60).

A still more remarkable resemblance to later customs was the employment of dwarfs as attendants upon the grandees of those days; and even deformed persons were admitted to a similar office; either from a superstitious regard for the pigmy god Pthah-Sokari (from whom the fable of Vulcan's lameness was borrowed), or from the better motive of compensating them for their misfortune. But dwarfs were a curiosity; and their yellow colour shows that they were sometimes brought to Egypt from a foreign country. Their Egyptian name seems also to bear a resemblance to that of a dwarf in Greek (*νανος*), and the Latin "Nanus."

Those who gained a livelihood by the chase used snares for large animals; some birds in the fields were taken in small spring traps, made of network; and geese, coots, and other waterfowl were caught in large clap-nets spread near the banks of the river, or in the marsh lands, where they were known to feed.

Fish were also caught in large drag-nets; and none but the rich who could afford the time, and the poor who could not afford a net, were in the habit of "casting angle in the brooks."

The abundance of fish was a great resource to the people; and the produce of the fisheries, particularly at the time of the inundation, was an immense revenue to the government; though we may not believe that the artificial Lake Mœris alone, during half the year, gave daily to the royal treasury a talent of silver (or £153 English) and twenty minæ (£61) during the other six months.

The different kinds of Nile fish are often represented on the monuments; and though prized by the Egyptians as they were regretted by the Israelites, they were very indifferent in flavour:

and some were considered even by the Egyptians sufficiently unwholesome to be made sacred, and forbidden as food. The priests, indeed, "abstained entirely from all kinds;" and on a certain day, when custom obliged the rest of the people to eat a fried fish before the door of their houses, the priests were contented to burn one in honour of the occasion; and the same regard for health led them to abstain from beans, and some other pulse, and especially from pork; which was in like manner unclean to the Jews, as it is still to the Christians of Abyssinia.

Pigs are therefore rarely represented; and if a pig is figured in a boat among the mysterious subjects of the tombs, it is only as a hateful emblem; the wicked soul, found wanting before the judgment throne of Osiris, being condemned to return to earth in the body of that degraded animal.

Potters were a numerous trade; and the wheel, the baking of earthenware cups, and all the process of the fictile art held a prominent place on the monuments.

The same idea of fashioning the clay is also applied to man's formation; and the gods Pthah (the creative power) and Nou or Neph (the divine spirit) are represented seated at the potter's wheel, and turning the clay for the human creation.

(W. 61.)

The forms of many Egyptian vases have been already given. One of the most common was the amphora precisely similar to that of the Greeks and Romans, and used for laying up wine in the cellar, as well as for other purposes. Bitumen was even brought from Asia in vases of this kind, in the time of the

18th dynasty: and one is preserved in the British Museum, bearing the word "tributé" upon it, which has the same form as on the monuments. When deposited in the cellar, these jars reclined, the inner row against the wall, and the outer rows against each other; but some had their pointed bases fixed in the ground, or upon a wooden stand, or in a ring of stone, to keep them upright;* which last mode of supporting them was evidently the origin of that very ungraceful footstalk found in Greek vases, especially of the later Apulian style.

(W. 62.)

Glass-blowing was also distinctly indicated; and the discovery of a glass bead with the name of a Pharaoh of the eighteenth dynasty, proves it to have been known upwards of 3200 years ago. We may also reasonably suppose this was not the first glass object made by them; and the use of glass bottles is distinctly shown by far older paintings, where the transparent substance is represented in the bottles holding wine, which were the same that continued to serve for that purpose in after-times (woodcut 62).

Glass was applied to many uses by the Egyptians, who were always celebrated for their skill in its manufacture; natron or subcarbonate of soda, a native production in different parts of the country, was the very substance most likely to lead to its invention, or rather to its accidental discovery; and it is far more reasonable to suppose that this would have been made where natron abounded, than from a fire once accidentally lighted on the sea-shore, by some Phœnicians who happened to be carrying a cargo of natron.

Some kinds of glass were made in Egypt alone, even in Roman times, when the ordinary manufacture had become

* P. A. of Ancient Egyptians, vol. i. pp. 46, 47.

generally known; nor is there any doubt that those with waving lines of different colours (already mentioned), so much prized by the Greeks and Romans, were originally a manufacture of Egypt, and continued to be exported thence till a late time. They had been made there at a very remote period; as well as other vases of the most beautiful quality, and most varied hues, required for domestic and ornamental purposes; and the well-known blue coating on stone or earthenware figures, as well as the opaque glass eyes of mummy cases, show that the vitrifying process was known as early as the fourth dynasty. Objects of glass, or vitrified composition, were very common; and among the infinite variety used as drop ornaments in necklaces, or trinkets, one may be noticed which is remarkable from its resemblance to a pineapple—being of a yellow colour topped with green leaves. Scarabæi also of vitrified composition, or of glazed earthenware, were very common, frequently most carefully executed, and bearing hieroglyphics very sharply cut; but they were evidently inferior in value to those of cornelian, amethyst, hæmatite, and other stones; and some of the most trivial objects were made of glass and vitrified work.

(W. 63.)

Scarabæi were used for funereal as well as ornamental purposes. In the latter capacity, they formed parts of necklaces, or mounted in gold were worn as rings, having some fancy device upon them, —a sentence, or a king's name; and those belonging to the dead contained a prayer, a portion of the ritual, or some other inscription connected with the deceased, on whose breast one was generally placed. Scarabæi frequently had the head of a man, a hawk, or a ram; some had the wings expanded, which were either of the same substance as the body, or of metal laid over it; and when a real beetle was embalmed, the lid of the

box, that served as its coffin, had a representation of it on the outside.

Glass, as may be supposed, was not used for windows in a climate like Egypt; but there can be little doubt that, if it had been adopted by the Egyptians, they would have made it part of the coloured decoration of their buildings. For though some at the present day run into the error of making pictures upon glass, no people imbued with a proper feeling for colour as a decorative adjunct to architecture would have considered the glass window other than what it always was, and should be, —a part of the whole coloured building. Nor would the Egyptians, nor the Greeks, nor Mediæval architects, have made the coloured glass windows a contrast to a white wall, as in some of our modern churches; where, too, they are often only on a par with transparent blinds. The incompatibility of the translucid material for a picture also points out the impropriety of making glass assume the place of the fresco wall, the panel, or the canvas; and glass should not certainly be allowed to attempt what is out of its power and its province to accomplish. It should be kept for the purpose, for which it is so well adapted, of decorative art; which, though not altogether excluding figures, makes them subservient to the general effect of ornamentation.

The employment of colour in architecture was well understood by the Egyptians; and they were so thoroughly acquainted with its various combinations, that however brilliant the hues they were never gaudy; for this vicious effect only proceeds from rich hues being put together without harmony. Their colours were few in number. They were aware that for decorative purposes the primaries should predominate, and that secondary hues should be secondary in quantity and in position; their most usual combinations were therefore blue,

red, and green; and a fillet of white or yellow was introduced between them, to obviate that false effect which is apt to convert red and blue into purple, when placed together in immediate contact. When yellow was introduced a due proportion of black was added to balance it; and for each colour was sought its suitable companion; or, if certain colours occasionally predominated in one part of a wall, the balance was restored by a greater quantity of others elsewhere, so that the due proportions of all were kept up, and the general effect was a perfect concord. The colours were simply mixed with water; the reds and yellows were ochres, the green a copper, the blue a smalt or pounded glass coloured by copper, the black was of burnt bone or ivory, and the white a pure lime or chalk. The secondary and tertiary colours, as purple, orange, and brown, were seldom introduced on the monuments, and were chiefly confined to papyri.

The appreciation of colour and of proportion were far better understood of old than in most countries of modern Europe; not from any theory, but because the eye was able to appreciate them; and a discord in colours would have been as offensive to them as a discord in music. The eye is the judge of one as the ear of the other; and though it would be disgraceful for any musician to sit down to an instrument and play out of tune, yet there is not a room we enter in this country, where the eye is not shocked by innumerable discords of colour. It is true that there are fewer eyes which can perceive discord in colour, than ears which can detect a false note; and, besides, there are many cases of vision naturally defective, or "colour blindness." But it is not by *beginning* with rules that the eye is to be taught to *perceive* colour; though the power when once possessed may be improved by them. It is the eye itself which is to be educated; and the habit of looking

at colours arranged in perfect harmony will teach those whose vision is not actually defective to appreciate the pleasure of such combinations · for to educate the eye by theory is as hopeless as to give a correct ear by rules to one who is unable to distinguish a discord in sound. Nothing indeed tends to fetter the perceptive faculty more than attempts to lay down laws for colour, drawn from some fanciful theory, before the subject itself is comprehended. It is like writing a grammar before the language is understood. Those of old who succeeded so well in the harmony of colours depended on the eye, the proper judge of their effect, instead of warping their judgment with crude theories; and the same practical result is now obtained in the East, where the uneducated child will arrange any number of colours with the most perfect concord. Nations, like individuals, often have certain natural gifts, and colour is one possessed by the Oriental in a remarkable degree, while few people in modern Europe appear fully to appreciate it; but since we perceive that untutored men in some of the wildest northern districts of the world have that faculty, it is not impossible that the conventional habits of civilisation may have blunted it; and that the eye and ear of man in a primitive state were gifted with a true perception both of colour and of sound. It is then, too, that the natural gifts to all men are very similar. They supply their wants much in the same way, allowance being made for climate and other disturbing causes; and the greatest differences of character arise from conventional habits.

The colour chosen by the Egyptians for painting the human figure was red; which was thought to be the true colour of man, as by the early Greeks, Etruscans, Assyrians, and many more. "Adam," too, signifies "red," and the names "Phœnician," "Edomite," and others, have the same meaning.

The colour was a bright red ochre, frequently called "ver-

milion" (as in Ezekiel xxiii. 14), which may afterwards have come into use; and not only did red continue the conventional colour in Egypt, but in other countries also; and in Etruria, the reclining figure on the lid of a sarcophagus retained, together with much of its early stiffness, the old colour, sanctioned by habit, long after a more varied style of painting had been introduced for the other figures on the same monument. Pliny, too, tells us the statue of Jupiter at the Capitol was painted with *minium* on holidays, as well as the bodies of those who triumph, which honour was conferred on Camillus; and the same custom of painting the statues of gods red was common to the Ethiopians, though they had little claim from their own complexion to that honourable hue. But they were of the red (Adamic) race of Asia, or as we should now call it, the Caucasian; and as Asiatics, were entitled to the honourable distinction of the red colour.

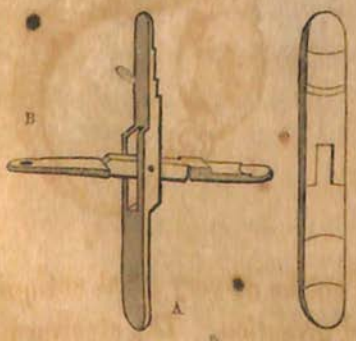
Gold workers are often represented on the monuments; and the various processes of washing the ore, of smelting it, and of weighing, and making the metal into ornaments, are introduced.* The balance used by goldsmiths was of very delicate construction, and instead of strings for suspending the scales, an arm terminating in a hook, to which the bags of gold were attached, was fixed at right angles to each end of the cross-beam. Another kind, used for light objects, had a registering plummet fastened to the beam; but the ordinary scales for weighing the rings of gold and silver that served for money, and for heavy goods, had the beam fastened to the pillar, with a tranverse bar above, supporting a ring through which the beam passed; and which not only showed, when hanging free, that the two scales were equally poised, but prevented the beam "tilting" when the weight was taken out of one of the

* P. A. of Ancient Egyptians, vol. ii. p. 137.

scales. The weights were a whole bull, probably "the talent," the half, the quarter, and the component parts of the talent;

(W. 64.) 1 2

which consisted of sixty minæ, and if the same as the Babylonian, was about eighty-one pounds troy; the mina (*men* or *mna*) containing a hundred drachms, and being sixteen and one-seventh ounces English.



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(W. 65.)

Another kind of portable scales has been found made of wood, and consisting of two limbs, each loaded at one end with lead; but its weighing capability was

very limited, and it only had two different weights, according to the quantity of lead fixed in one or the other of its two limbs (woodcut 65, A and B). It was of small size, so that when closed it could be conveniently carried in the pocket or the

(W. 66.)

girdle; and, though this may not be of very great antiquity, it was probably a copy of an old invention. The steelyard does not appear to have been used in Egypt until Roman times.

Besides the above-mentioned processes, that of making,

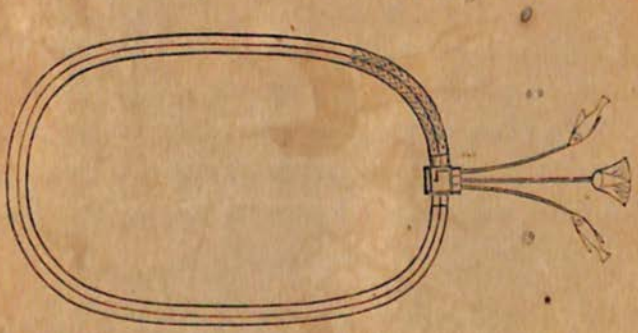
engraving, and polishing vases, and other objects of gold and silver, is frequently represented, and the not uncommon use of the forceps and blow-pipe is pointed out in the same subjects.*

(W. 67.)

Ornaments of gold and silver, such as the Israelites borrowed of the Egyptians, are constantly found in the tombs, among

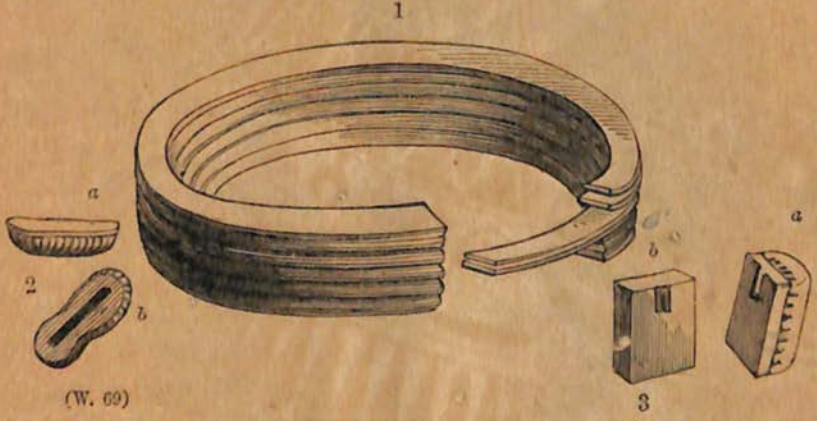
* P. A. of Ancient Egyptians, vol. ii. pp. 58, 139.

which the snake was as favourite an ornament as in later times. Emblems of Athor and other deities, the bull Apis, and numerous conceits offered an endless variety in Egyptian



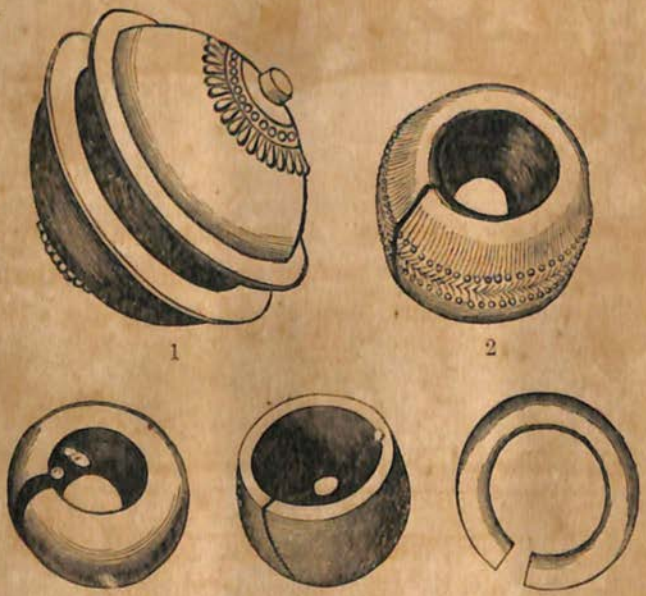
(W. 68.)

jewellery; as may be seen in the many necklaces and other objects once worn by women, preserved in the British Museum



and other collections. The paintings abound with no less variety of them; and rich necklaces of gold or other materials, bracelets, ear-rings, and armlets are shown to have been universally worn by the wealthy Egyptians. Many of their bracelets and other ornaments are beautifully wrought; and the clasps of some of their necklaces are on so perfect a

principle (woodcut 69, fig. 2, 3), that they might have been made by a modern jeweller; but among these various objects some are particularly worthy of remark from being very similar to those often found of Anglo-Saxon and early Irish time. It is uncertain to what purpose they were applied, both in Egypt and in our islands. They are of gold, silver, carnelian, ivory, glass, and various compositions; generally open in the centre, with a small fissure at one side (woodcut 70, figs. 2, 3, 4, 5), and one which appears to have been intended



1 2

(W. 70.) 3 4 5

for a similar purpose (fig. 1) was composed of two lobes connected by a spiral shaft at the centre. They may have answered as studs, or as fibulæ.

Ornamental work of various kinds, in gold, silver, or bronze, sometimes gilt, sometimes inlaid with other metals or precious stones, was made in great quantities. Some had designs chased, engraved, or punched upon them and others a sort of

enamel or opaque glass composition inlaid in the metal, previously hollowed out to receive it; of which last many good specimens are found in the winged figures and other orna-

(W. 71.)

ments seen in our museums. A bracelet in the Louvre has a device of gold inlaid in this manner, which, in the workmanship of its hinge, is like many worn at the present day. Highly

(W. 72.)

ornamented gold vases were equally numerous, especially about the wealthy period of the eighteenth and following dynasties. Such were the baskets represented in the tomb of the third

Remeses; and the cup of Thothmes III. in the Louvre, all of the same precious metal; which last measures about seven

(W. 73.)

inches in diameter, and has fish and other devices, with a border of hieroglyphics in relief, punched upon it from within.

Though gold-beating in its modern improved state is an improvement of the seventeenth and eighteenth centuries, the Egyptians overlaid wood and other materials with leaf of great fineness at a very remote age; and beating, damascening, engraving, casting, inlaying, wire-drawing, and other processes were adopted by them more than 3900 years ago. It is not, therefore, surprising that Homer should mention the horns of an ox overlaid with gold, as well as other arts long known in Egypt. But the covering of gold was generally of considerable thickness, compared to what we use at the present day.

Gold was the precious metal *par excellence*, and is shown to have been used in Egypt at an earlier time than silver, this last being called "white gold," or "*noub-hat*," whence *hat*, "white," alone came to signify "silver." In this the Egyptians differed

from the Greeks, who employed the word "silver" for "money" (like the French "*argent*"), from its having been first known to them. The Egyptians had no coined money; their gold and silver was in rings, similar to those used at the present day in Sennár; and, like the iron rings of the ancient British mentioned by Cæsar, when purchases were made, they were tried in the scales to ascertain if the "money" was "in full weight."

The use of other metals—as tin and zinc (mostly for bronze and brass), as well as of iron and steel—is either directly proved by discoveries in the tombs, or inferred from the monuments; and the manufacture of bronze is shown to have dated at least as early as the fifth dynasty, more than 4000 years before our era. But, as in some other countries, the use of hammered bronze preceded the two processes of running the metal into a mould, and casting it hollow on a core. The bronze of Egypt varied in its quality according to the alloys it contained, some having more or less tin, some being mixed with silver or other metals; but that for ordinary purposes contained 80 or 90 of copper to 20 or 10 of tin, like most bronze of Roman times. That of Greece varied much in quality and colour, from the proportions and variety of the alloys; the most noted of which was the Corinthian bronze, miscalled "brass," and which, from the silver it contained, had a "pale" hue. This was an old manufacture, and was not, as an idle and improbable tale asserts, the result of an accidental mixture of metals at the burning of the city. Some of the Corinthian cups had even the richness of gold: and drinking-cups of this kind have been found in Greece. Indeed, the fine quality of Egyptian and Greek metal mirrors and other ornamental objects is well known, and many of the latter were made to assume various colours by the introduction of bronze of different alloys; which process, having been first adopted by the

Egyptians and Sidonians, was afterwards carried to great perfection by the Greeks.

Iron was also known in Egypt at a very remote period, and the butchers sharpening their knives on a bar, which, from its blue colour, was evidently steel, is represented on monuments of the fourth dynasty,* as well as on those of later time. And if bronze implements continued to be adopted long after iron was known, this is no argument against the use of the latter, as we know the Romans and others did the same for ages after they had made arms and common utensils of iron. The case-hardening of iron, by plunging it red-hot into water, is even mentioned by Homer; and the more we enquire into, and become acquainted with, the customs of people in the early ages of the world, the more we are convinced that iron supplied their simplest wants much in the same way at all times, and that many secrets were known which we blindly suppose to be of late date. There is great truth in the remark, "There is no new thing under the sun," as there also is in the Arab saying, "The world is very old;" and if Tubal Cain was, ages before the time of Moses, "an instructor of every artificer in brass and *iron*," the discovery of these will not date at a very recent period. Nor is it sufficient to establish the fact of an acquaintance with the use of iron—it is evident that its properties as steel were not unknown; and those who deny a nearer approach to it than case-hardening will find it difficult to reconcile the mention of "a bow of steel," (Ps. xviii. 34), and other evidence of its use, with the mere hardening of the external surface of iron. Solomon, too, says, "iron sharpeneth iron."

We are too apt to consider discoveries and inventions now; and to under-rate the knowledge of man in old times.

* See P. A. of Ancient Egyptians, vol. i. p. 169; ii. p. 155.

Ancient history and the monuments show that the Egyptians had arrived at many very correct notions, which could only have been derived from long experience in mathematics and astronomy; and the theory of the sun being the centre of our system, the borrowed light of the moon, the revolution of the earth round its own axis, and other scientific discoveries obtained by the Pythagoreans from Egypt, contradict the too hasty notion of their not having extended their thoughts beyond astrology. Man, arrived at a certain state of civilisation, employs his time and talents on the same inquiries which afterwards continue to attract attention; and in no country were geometry, surveying, and levelling of land, hydraulics, "the motion of the stars," and calculations for ascertaining the exact returns of the seasons so necessary, or so inviting, as in Egypt. Nor were shrewd remarks wanting in early days, on ordinary phenomena:—"The wind," says Ecclesiastes (i. 6, 7), "returneth again according to his circuits," and "rivers run into the sea . . . and unto the place whence the rivers come thither they return again;" and though none of those great strides in science had yet been made which distinguish a later age, many very sensible inferences were drawn from observation at a very remote age.

But of all errors, none is so palpable as that of attributing to a people of a comparatively recent age discoveries known before they existed as a nation, and though we may smile when Pliny tells us that Rhœsus and Theodorus of Samos were said to have invented the casting of metals, that Cleanthes of Corinth was the first to represent forms by lines, and that numerous other arts, practised for ages in Egypt, Assyria, and Phœnicia, were invented in Greece, we feel surprised at finding the same repeated by modern writers, as if the Greeks had been the first inhabitants of the earth, and had originated everything

at home. For Egypt had passed the most advanced period of her career, and was a falling nation, before the Greeks cherished, or required, the arts of civilisation; the Egyptians were fully justified in calling them "young," without any claim "to antiquity," in the days of Solon; their history and their works were modern compared to those of Egypt; and even the remains of Nineveh are mostly of a period when Egypt was no longer the flourishing country of the Amenophs, the Thothmes, and the Remeses. If Homer mentions many elaborate works, like the shield of Achilles, which the Greeks were not then capable of making, we have a proof that the art was practised by some older people, whose works were well known. They did not certainly originate in Greece; nor do we fail to perceive from Homer that the Greeks were indebted to the Sidonians for many secrets in the working of metals. No one indeed, who has carefully examined the earliest works of the Greeks, can have failed to perceive in them the impress of a foreign origin; many offsprings of Egyptian fancy, adopted by the Greeks, show how the known habit of man to borrow from the dominant nation of the day was common then as it has ever been; and the story of Dædalus having visited Egypt tacitly admits the origin of the arts ascribed to him, whether a real or imaginary personage.

That the Greeks afterwards far surpassed the Egyptians, and added immensely to the discoveries of their predecessors, all will admit; and we cannot sufficiently express our admiration for their talent, or the obligation we owe them for that knowledge and refinement which has contributed so greatly to modern civilisation. Many arts were exclusively their own:—the glorious result of unfettered genius; and many improvements on imperfect ones were equally creditable to their talents and their taste; and the real sterling merit they will always

enjoy is too great to make it necessary to claim for them an originality, and antiquity, at variance alike with history and truth.

The skill of the Egyptians in metallurgy was very great; and we have ample proof of the working of metals at the earliest times of which any monuments remain; nor is it too much to say that some of the secrets they possessed, particularly in the manufacture of bronze, are still very imperfectly known to us.

In connection with this art, the paintings notice the forceps, the blow-pipe, and the bellows, which last even appear to show an acquaintance with the principle of the valve;* and though they give very few of the inventions of Egypt, they prove the early use of siphons,† and many efficient tools of different crafts. The syringe was also known; and one instrument occurs, even on the monuments of the fourth dynasty, which has the appearance of a hand-pump (woodcut 74). And if many of their arts, as well as their skill in mensuration, geometry, arithmetic, astronomy, and various branches of science are unnoticed, we are not surprised at the omission of subjects so little suited to sculpture, or the embellishment of a tomb.

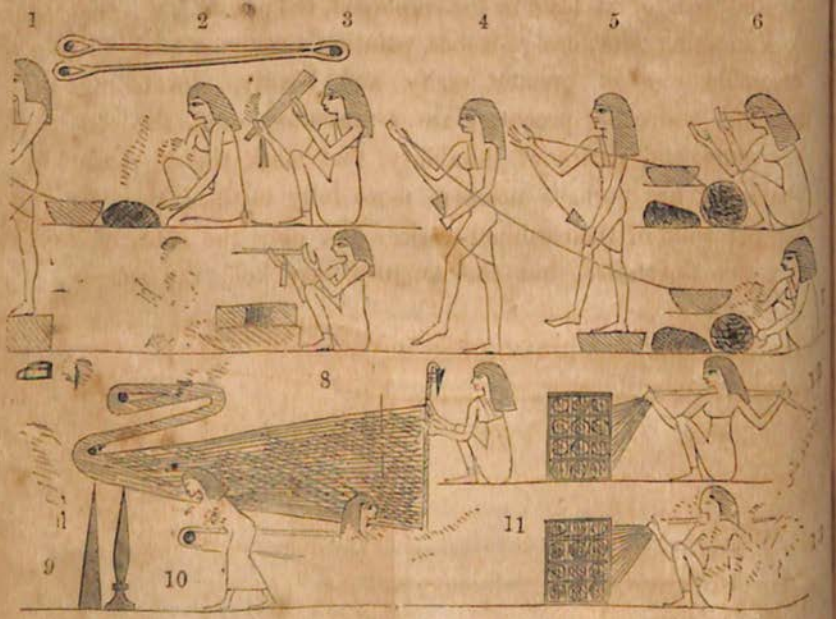
(W. 74.)

The process of growing flax, steeping and beating the stalks, making it into thread, string, and ropes, and also into a piece of cloth, are all pictured, as well as the looms they worked on, which were of the most simple kind. Some were vertical, others horizontal; and the mode of taking up the piece as

* P. A. of Ancient Egyptians, vol. i. p. 174; ii. p. 316 (woodcut 457).

† Ib., vol. i. p. 174; ii. pp. 317, 318.

it advanced towards completion, in order to make room for the working of the machine, by winding it round pegs fixed at intervals in the ground, is precisely similar to that still adopted



(W. 75.)

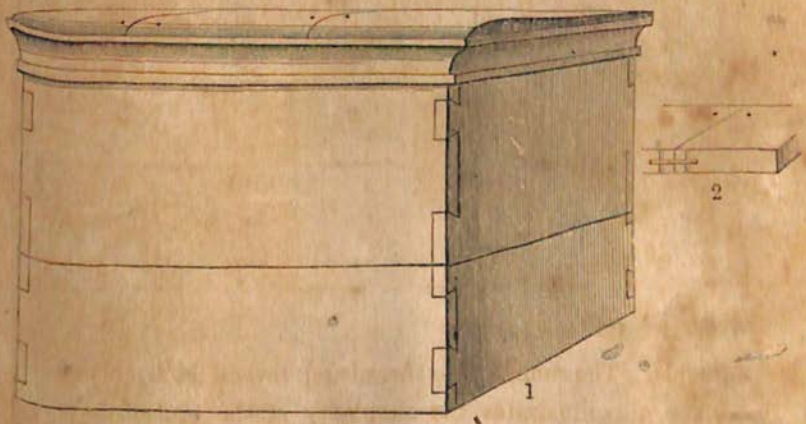
in Ethiopia. The running the threads off several balls, placed in a frame, also illustrates the simplicity of the process they adopted in these and other operations, which is still a marked peculiarity in the manufactures of the East (figs. 12, 13).

Mat-making was exactly similar to that adopted by the modern Egyptians, and by the Spaniards of Andalusia, who derived it from the Moors; and the mode of laying out the frame on the level ground, and pinning it down with hooked pegs, as well as the position of the workman, might serve to represent the modern, as completely as the ancient, process.

Carpenters and cabinet-makers were a very numerous class;

and under this head may be included. boat-builders, those who made the woodwork of chariots, and coffin-makers; though the undertakers, properly so called, belong to another class connected with, or at least in the employ of, the priests.

Veneering with foreign woods, painting a common quality to resemble one of greater rarity and beauty, dovetailing, glueing, and other processes are represented; and the cautiousness and desire of durability, that mark the Egyptian character, are perhaps nowhere more fully testified than by the precision of their cabinet-work. Not only the sides of a box are dovetailed, but the tongues that hold the spliced



(W. 76.)

boards are again secured with pins driven through them (fig. 2), and the same care is shown by the frequent combination of glue and pins in the same case.

In sawing they frequently fixed the wood upright, secured by pins in lieu of a vice; or with the pins passing through the piece of timber itself, in order to support the planks as they were cut apart; which is the practice of modern sawyers. They used a large hand-saw for this purpose; and, for hewing large

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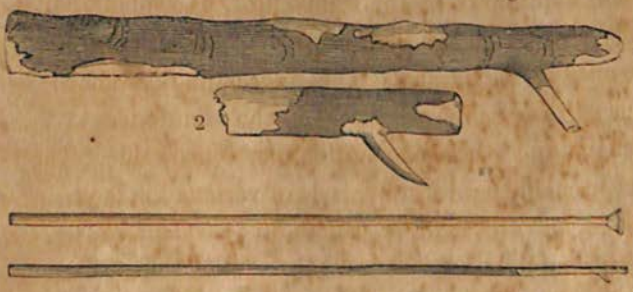
(W. 78.)

pieces of timber, the axe or hatchet, or sometimes the adze; which last was employed even for fashioning very small kinds of wood-work (woodcut 78, fig. 1); and we may readily judge, from the expertness of their unskilful descendants, how successfully that tool must have been managed, when in the hands of the ancient Egyptians. This, indeed, is fully shown by the remains of their cabinet-work; and the minuteness of finish in their chairs and other furniture is very remarkable. The other tools they chiefly used were chisels of various kinds struck with the mallet, the awl, drill, or centre-bit (woodcut 77, fig. 6), the hand-saw, and light hatchet; and these, with the oil-horn (woodcut 77, fig. 11), and a few other implements have been found in the tombs. The age of the fourth dynasty is sufficient to rescue the invention of the saw from the mythical Dædalus, to whom it is ascribed by Pliny; and a similar inaccuracy may be found in most of the other inventions claimed by him for the Greeks.

Rare woods were imported into Egypt, in great quantities, from Central Africa, and from Asia; among which ebony, and woods of dark red and variegated colours, cedar, cypress, cherry, and walnut, were the most common. The last five were from Syria; and those of the country were chiefly confined to sycamore, several acacias (which gave a hard and useful wood) the *persea* or *balanites*, the date and Theban palms, and the two tamarisks.

Ivory was often combined with ebony, and even with other hard woods, in ornamental furniture; it was sometimes stained red, or bright blue, as occasion required; and gold, or gilding, was frequently added to increase the richness of some fancy wooden trinket. Walking-sticks of cherry, or of acacia, about five or six feet long, were very fashionable; the natural colour of the former being often set off by the addition of bright red, yellow, and other colours, sometimes with fillets or lines of

gold; and they had either a hook towards the upper end, or were surmounted by a round knob of turned ivory (woodcut 79).* Cherry-bark was thought very ornamental; and in Dr.



(W. 79.)

Abbott's collection is a bow made of three pieces of another wood, fastened together lengthways, and covered with that bark. It was removed by beating (as when boys make a

(W. 80.)

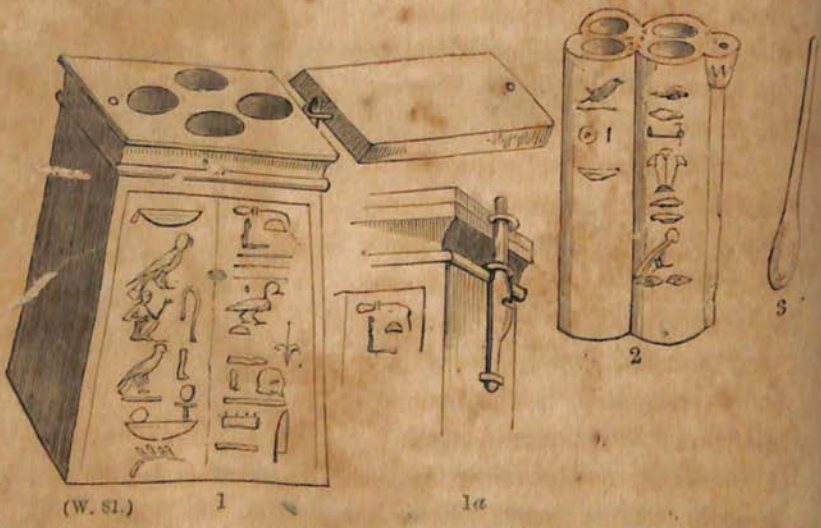
whistle), and transferred to another stick. The same process is still adopted in making the Turkish cherry-stick pipes.

Boxes and cabinets were of many shapes and sizes, according

* See P. A. of Ancient Egyptians, vol. ii. (woodcuts 477, 478).

to caprice, or the purpose for which they were intended; some being square, with or without fancy feet; and others flat, circular, or pointed at the top, with folding or sliding lids. They were either of ebony, inlaid with ivory, of hard or of ordinary soft wood, or painted to imitate some rare quality; and many were of common sycamore, deal, or cedar, covered with a coating of stucco, on which various subjects were painted in rich colours.

Some were intended for ornamental, others for sacred and funereal, purposes; and the most remarkable were the rich canopies placed over the throne of a king, and the statues of the gods. These ranked among the most important works of the cabinetmaker; and they were not only richly decorated with carving, but were inlaid with coloured porcelain and gold, like the sacred shrines, or arks, standards, and other wooden ornaments used in the temple. Numerous fancy boxes and



(W. 81.) 1 1a

trinkets were also made for domestic use. Those intended for the toilette were frequently in the form of animals, geese, fish,

or the human figure; and boxes that held the *kohl*, or collyrium, used for painting the eyes, were also of various fanciful shapes (woodcut 81). But they were not always of wood; and many were of coloured porcelain, and other richer materials; and some, made of coloured glass, of the same quality as the imitation Murrhine cups, already mentioned, were in the form of an Egyptian column.

Some boxes appear to partake of the character of spoons, the handle terminating in a goose's head, or representing a whole fox, or a white slave holding a cup in the shape of a goose with a movable lid;* and one of these last, discovered at Thebes, curiously illustrates a mode adopted by slaves of wearing their plaited hair, which in this, and other instances differed much from that of Egyptian ladies.† Similar handles, in the form of human figures, were adopted by the Greeks, for vases and *paterœ*.

(W. 82.)

Another specimen occurs of a small box for the toilette-table, borne by a girl carved in wood, the whole being about five and a half inches high (woodcut 82); and numerous other fanciful boxes, cups, and spoons, were the work of the cabinet-makers and the carvers in wood.

Wood was used not only for small ornamental figures and trinkets, but for large statues also. Nor was this chiefly

* P. A. of Ancient Egyptians, vol. i. pp. 159—162, 183, 184.

† Ib., vol. i. p. 160 (woodcut 177).

confined to a primitive age, as in Greece; for some figures of the Pharaohs continued to be made of it, above life size, to the latest times. But the Egyptians never adopted ivory for the same purpose as the Greeks in their chryselephantine colossi.

Coffins, or wooden sarcophagi, were mostly of sycamore, deal, or cedar, covered with a coating of stucco, and richly painted; and the models of boats and other wooden objects connected with the funerals of the dead, showed the same skill of the Egyptian workmen.

Boat-builders were of two denominations: one belonging to the carpenters, who constructed vessels of wood; the other to basket-makers, who made boats of the papyrus. The ordinary boats of the Nile were of planks of the acacia, fastened upon ribs of the same wood with wooden bolts; and they were partially or entirely decked. They had one mast, a single square sail, with one yard above and another below; which was trimmed by halliards and sheets, and raised or lowered by lifts running in dead-sheeve holes at the top of the mast, which answered in lieu of blocks. Latine sails were never used by the ancient, as they are by the modern Egyptians; and no instance occurs of a boat with more than one sail or one mast.

In early times the mast was double, but being found cumbrous, it gave place to a single one; and to the sail, which had then only an upper yard, was added another below; both yards being frequently of two pieces, scarfed together in the middle, and supported by lifts. The upper yard might be lowered when necessary, in order to shorten sail, which was probably taken in by rolling up the lower yard in it, as is still done in the square-rigged boats of Ethiopia; but when furled, the sail was brailed up, and then bent upon the upper yard; which was afterwards let down to the lower one. The cabin was of light wood, probably deal from Syria, painted as usual

with the brightest colours; and in common boats, used for carrying goods, or cattle from the farm, it was of sycamore, or of open wickerwork.

Boats had either one rudder turning on the taffrel, or two—one at each side of the quarter; and in those employed for funereal purposes the eye of Osiris was painted on the rudder-blades, and on the head of the boat itself. This last custom is still common in China, and even in the Mediterranean; and the rudder turning on the taffrel is used in the boats of the Loire, and some other places.

The oars were large at the end, in the form of a lotus leaf, or diamond shape, or oval; and the sail was of cloth, frequently painted, or worked, in coloured patterns. Embroidered cloth for sails is mentioned by Ezekiel, as having been imported from Egypt to Tyre; and the sails of boats represented in the tomb of King Remeses III., at Thebes, are covered with fanciful figures, flowers, and other devices, with squares in cheques, and rich borders worked in various colours.

Many vessels were of very great size, and were employed for carrying corn and heavy cargoes, especially during the inundation; and some ships, mentioned by ancient writers, measured upwards of 400 feet in length. But these last were rather objects of caprice than of utility; or dedicated to some deity, like that presented by Sesostris to Amun, the god of Thebes, which was 280 cubits, or 420 feet long, and built of cedar.

The papyrus boats were chiefly punts for fishing, or for gliding through the fens of the Delta. They were made of the stalks of some of the many kinds of Cyperus rush, which abounded in Egypt, and which, though differing from the real Biblus used for making paper, were included by the ancients under the general name *papyrus*. To construct them, layers of the stalks, placed lengthwise, were fastened together by bands

of the same plant threaded in between them; so that the boat was not inaptly said to be "sewed together;" * and the whole was covered with a coating of pitch, like the "ark of bulrushes" in which Moses was deposited, and which was of similar construction.

And here, in speaking of the word "ark," I avail myself of the opportunity to mention a strange attempt to connect the name of Thebes with the Hebrew word *Thebeh*, and thence with the Ark of Noah; which is at once shown to be erroneous, from the name of that city being a corruption of the Egyptian "*ápé*," or, with the article *Tápé*, (in the Memphitic dialect *Thápé*,) "the head," or "capital," converted by the Greeks into their own "*Thébai*."

Some of these papyrus boats were large enough to hold several men; † and they were generally propelled by long poles or by paddles; but they were rarely, if ever, furnished with a sail.

Those who made the wooden parts of chariots, as the framework, the wheels, pole, and yoke, were of the class of carpenters; the fittings of the inside and the bindings of the framework, as well as the harness, which were chiefly of raw hide and leather, being the work of the curriers, who, with the tanners, were a numerous trade. In Thebes a district of the town was assigned to the "leather cutters;" and a great quantity of leather was used for shoes and sandals, in household furniture as well as in chariots, for harness, for bow-cases, shields, and various objects connected with a soldier's outfit, for covering musical instruments, and as a substitute for writing paper, besides other purposes; and the skill of the Egyptians in preparing and in stamping leather is fully testified by the few specimens of that perishable material that have

* P. A. of Ancient Egyptians, vol. ii. p. 120, woodcut 399.

† See above, woodcut 6, p. 18.

been preserved. They are chiefly straps placed across the breasts of figures; and most of them bear the names of the later Remeses,* of Sheshonk (Shishak), and of the Osorkons. Leather was used by the Egyptians at a very early time; and it is curious to see that in cutting a piece of hide, whether tanned or undressed, into strips for making thongs, they practised "what we term the circular cut," which, as well as our modern semi-circular knife was used by them more than 3000 years ago.† Their mode of twisting leather thongs was also ingenious,—four or more being fastened at one end of a tube, which, being furnished with a swivel, was attached to a strap round a man's body, who whirled round the tube with the thongs by means of a heavy weight projecting from it; while another man held the other end of the thongs, and, to use a nautical term, "paid them off" carefully to prevent their becoming entangled during the operation.

But ropes were generally made of flax; and for common use were of the fibre of the date-tree, which not being liable to injury from wet was well suited to all purposes connected with the drawing of water, and was recommended to the peasant for its cheapness and strength. The flax nets of Egypt were also famous, and of the finest texture.

Sieves were often made of flax-string, but many of a more common quality were of thin rushes, and that they were originally of this simple material is evident from the "sieve" being represented in the hieroglyphics as composed of rushes. These were the work of the basket-makers—a numerous class of people employed in making seats of common chairs, and the many kinds of baskets used in Egypt, as well as

* They have been found with the name of Amunoph III.

† See also P. A. of Ancient Egyptians, vol. i. p. 377, woodcut 333; and vol. ii. p. 94, woodcut 390, fig. *c.* and *i.*

brooms and brushes, all which were generally of halfeh grass

(W. 83.)

or palm fibres. To the same department also belonged the

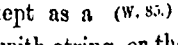
(W. 81.)

manufacturers of papyrus boats; and the makers of mats

be included under that class, of which the basket-makers formed one section.' The baskets were often beautifully made, closely knitted together, and of many rich colours, the rushes being dyed beforehand; and the skill in basket-work, for which the people of Ethiopia and the Oases are still so remarkable, is doubtless derived from their Egyptian predecessors (woodcut 84).

Though leather was sometimes used for writing purposes, paper was generally made in Egypt of the well-known papyrus, which grew in the marsh-lands of the Delta. The part of the plant employed in its manufacture was the pith of its triangular stalk; the outer rind serving for mats, baskets, and similar purposes.

The mode of making the paper was by cutting the pith into thin slices in the direction of its length, which, having been laid on a large slab or table, received upon them other similar layers at right angles,—and the two sets having been glued together, and kept under pressure for a proper time, formed a sheet. The breadth of the paper depended in some degree on the size of the plant, the length being only limited by convenience; but as the breadth varied from about six fingers (nearly four and a-half inches) to twelve or fourteen and a-half inches at most, it is evident that a very small portion of the whole length of the plant was taken for that of the same sheet. For the stalk was about fifteen feet in height, and the upper part was used for making paper of inferior quality.

When a sheet of papyrus had been used for writing, it was rolled up, and placed upright in a box; and  (W. 85.)
when deposited with the dead, or kept as a secret document, it was bound round with string, or the stalk of a plant, and secured by clay stamped with a seal.

The papyrus was a government monopoly, and in order to keep up its price, its cultivation was at one time forbidden

in every place except the Sebennytic Nome,—so that poor people were obliged to write accounts, or memoranda, on fragments of pottery, and other cheap materials; and even artists practised their pencil, and made rough sketches, on pieces of prepared wood, or slabs of limestone.

But custom or law required that public documents, conveyances, deeds, and all large funereal rituals should be drawn out on the authorised papyrus (except on certain occasions, when leather, skins, or prepared cloth were permitted); and the papyrus may be said to correspond to one of our *stamps* for legalising an important paper, and ensuring its validity. The effect of this at length recoiled on the authors of so short-sighted, and illiberal, a policy; the neighbouring princes and others who collected libraries, soon found out substitutes for the papyrus,—and parchment, which received its name from Pergamus, where it was first employed on a great scale for paper, made the kings of that place independent of the Egyptian papyrus. Other substitutes were afterwards invented, and paper from cotton and linen rags at length entirely superseded the once famous papyrus. The prophecy of Isaiah, that "the papyrus reeds by the brooks . . . shall wither, be driven away, and be no more," has come to pass,—the plant is no longer a native of Egypt, and it is now only found in the Anapus near Syracuse, and in a stream of Syria.

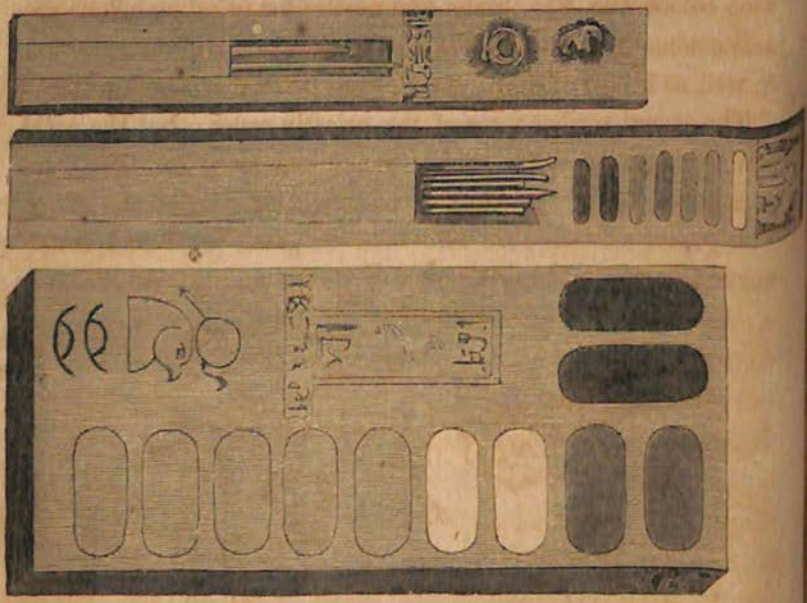
The dried flower-heads of the papyrus have been found in the tombs, and the plant is often represented in the paintings.

The occupations of the painter and sculptor were not omitted on the walls of the tombs; and though the monuments themselves bear sufficient testimony of their skill, one fact is recorded in the paintings of Beni Hassan, which we might not have learnt from any other source. This is their early art of painting upon panel, which is shown to have been

practised in Egypt more than 2000 years before our era, and is one of the many proofs of Egypt having been the cradle of various branches of knowledge long afterwards carried to such perfection by the Greeks. But the conventional habits of the Egyptians, who were fettered by prescribed rules, and afraid of disregarding the veto of orthodoxy, prevented the arts of painting and statuary from taking their proper place; so that they never arrived at a real representation of natural events, much less at that highest branch of art,—ideal beauty; which the Greeks were the first to comprehend, and practise. Nor did the Egyptians understand the beauty and true province of bas-relief like the Greeks: in their battle scenes they attempted to make a picture; and in order to obviate the confusion resulting from a number of sculptured figures one behind the other they placed them in all parts of the same field, regardless of the sky, or of perspective, providing only against everything which might interfere with the hero of the subject—the king; who depended on colossal size, instead of art, for his importance. But as they had not yet learnt to distinguish between the province of painting and sculpture, great excuse may be found for them; which may not be so readily conceded to some later pictures in stone, bronze, and other materials, of mediæval and modern times. In these two the anomaly of a landscape background is the more unpardonable, as we have learnt the beautiful and necessary effect of aërial perspective, which cannot of course be obtained in such materials.

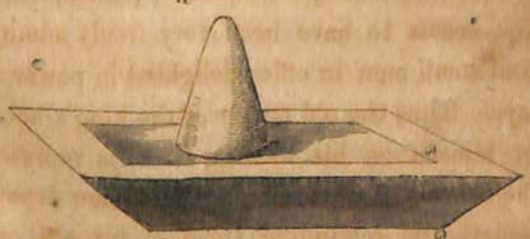
Painters and sculptors held in Egypt a rank similar to that of architects and professional scribes,—from which last they can scarcely be separated. The same kind of wooden palette, or inkstand, was used by the limner in drawing outlines, as by the scribe in writing upon a papyrus (woodcut 86, fig. 1); and the same kind of reed pen was employed for both purposes.

The inkstand contained two colours, black and red; the latter being introduced at the beginning of a subject, and for the



(W. 86.)

division of certain sentences,—showing this custom to be as old as that of holding the pen behind the ear often pourtrayed in the paintings of the tombs.



(W. 87.)

Some palettes contained more than two colours,—black, red, blue, green, and white (fig. 2). They were of the same long shape as the ordinary inkstand, with the usual case in the

centre for holding the pens; and some were of square or oblong form, made of wood or stone, with a larger cavity for each colour (fig. 3). Slabs and pestles for grinding colour are also commonly found in the tombs of Thebes (woodcut 87); as well as lumps of ochre, green, blue, and other colours.

The sacred scribes were of the priestly order; but the royal scribes might be either priests or military men, and they were generally sons of the king, or of the chief men of the court. The public scribes were also men of great trust and consequence, to whom the settlement of public and private accounts

(W. 88.)

was committed; and they assisted, or performed the office of, magistrates, in condemning defaulters to punishment.

The stick seems to have been very freely administered in Egypt; and small men in office delighted in power then, as in modern days. Thus the old porter of the king's house, obliged to support himself on his walking-stick, is represented marshalling the bearers of bags of gold, and other deposits for the royal treasury, and reminding them of his authority by an occasional blow of his wand; and even artisans stimulated the exertions of their workmen by the stick.

The skill of the Egyptian doctors was celebrated: and they had adopted a custom indicative of great advancement in civili-

sation, of assigning to a particular member of the profession his peculiar branch—oculists being distinct from those who treated diseases of the head and other parts of the body. Accoucheurs were mostly, if not always, women. But the paintings give little, if any, indication of their duties, except of the last mentioned; and it is uncertain whether the supposed doctors at Beni Hassan may not be barbers. Surgical instruments, however, have been found; as well as slabs or cases, which appear to contain models of the most ordinary requirements of the doctor, whose figure sometimes accompanies them; among which are bottles, salve-pots, and knives similar to those they used for circumcision. Other instruments, chiefly bronze, have been discovered in the tombs; and, though it is uncertain for what purpose most of them were intended, or to what trade they belonged, some were in such common use, that it may not be uninteresting to introduce them here. Among them may be seen small bells (woodcut 91, figs. 6, 7): but though many of the others are known to be of early date, it is uncertain to what time these last may be

(W. 89.)

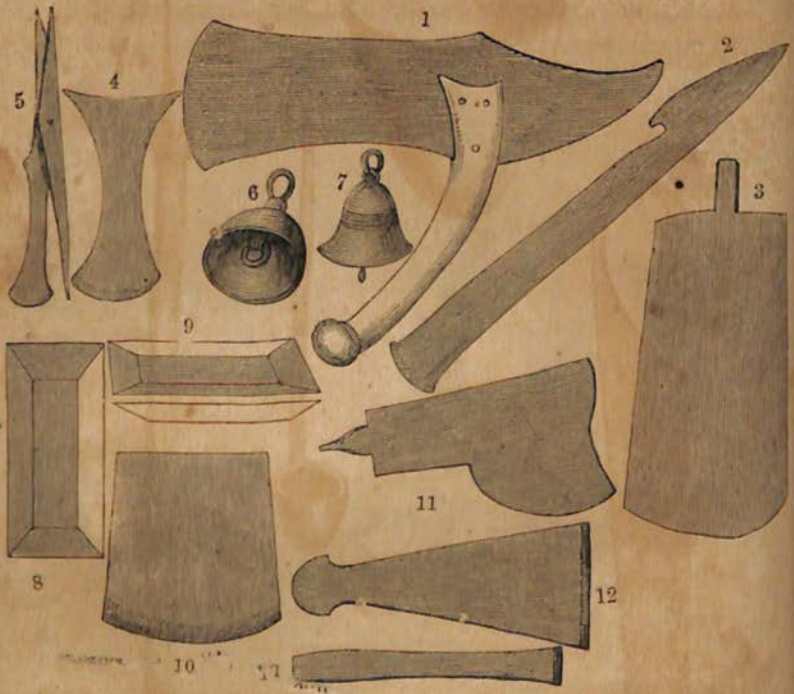
assigned, or when bells were first invented. Knives of various forms have also been found; one of which, now in the Louvre collection, has a place for the fingers rather than a handle, in the curved shape of a goose's neck. Its whole length is twelve

(W. 90.)

inches (woodcut 92, fig. 1). Bronze needles were not uncommon, about the size of those we have for rough sewing, or three and a-half inches long; and a pair of bronze tongs, found at Thebes, and now in the British Museum, are remarkable for their finish, and for the very Egyptian caprice of making the two ends in the form of fish. They even retain their elasticity—the sides being kept apart by a block of wood.

Bronze *simpulæ*, or ladles, frequently gilt, used for taking liquids out of vases, are also found; and one in the Louvre has its bowl in the strange form of an oryx, the emblem of the god Pthah-Sokari-Osiris (woodcut 92, fig. 3); but weapons of

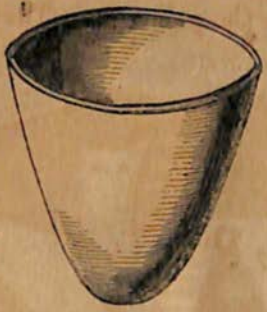
various kinds, as might be supposed, are much more common, both in the tombs and in the paintings. They are of bronze,



(W. 91.)

but the coloured representations of them show that some were of iron or steel, being painted blue. They consisted chiefly of the short sword or dagger, the spear, javelin, and arrow, the club, pole-axe, the hatchet, the battle-axe, and the falchion; and many specimens of the three last may be seen in our museums (woodcuts 94, 95). The arrows were of wood or reed, with a bronze head (woodcut 96, fig. 2); but those used for the chase were frequently tipped with flint (fig. 1), or had a point of hard wood (fig. 3), the shaft itself being of reed.

Crucibles belonging to the workers in metal have also been

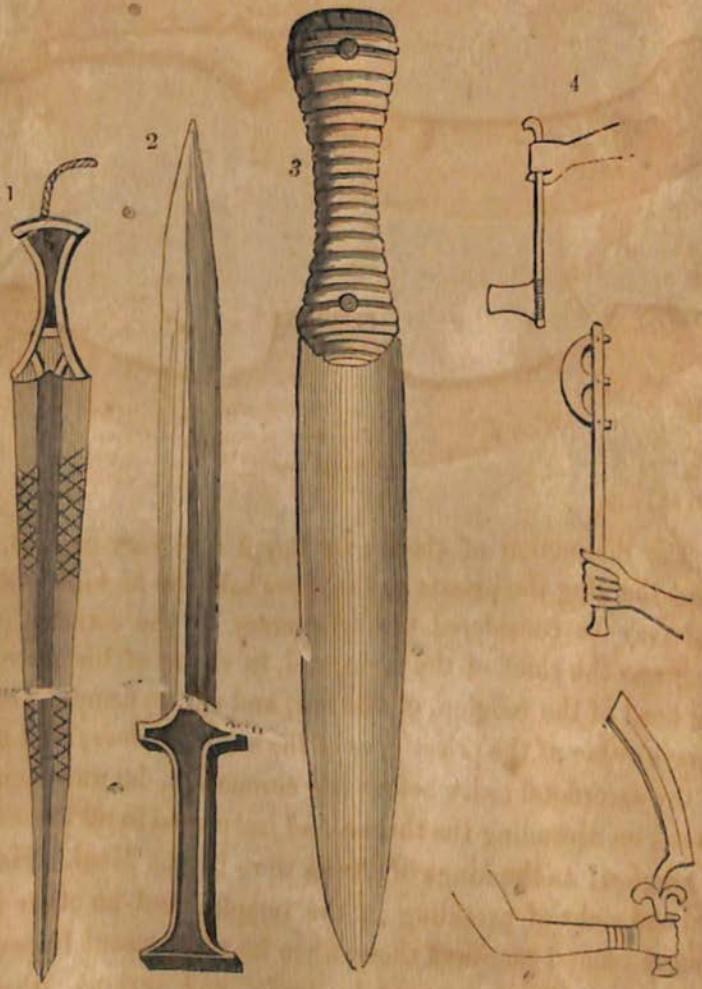


(W. 93.)

(W. 92.)

discovered, which, in size, material, and form, much resemble

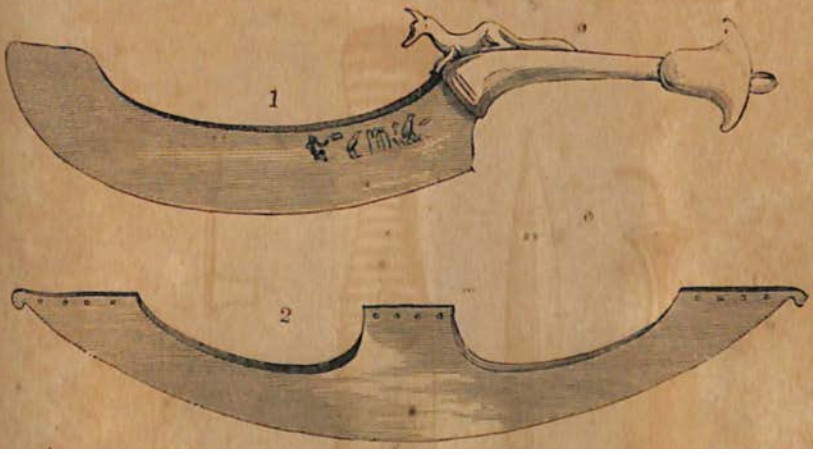
those of the present day; they are four and three-quarter inches in diameter, and a fragment of one I have contains particles of smelted copper. (Woodcut 93.)



(W. 94.)

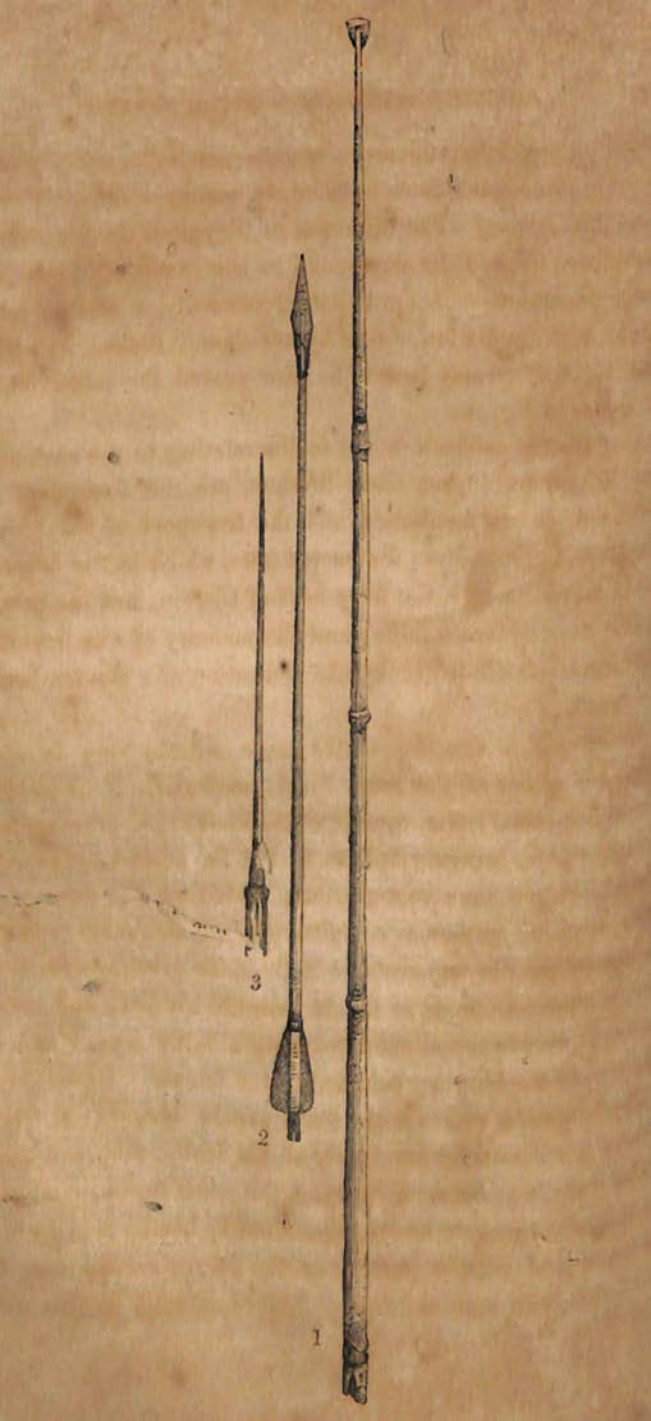
From what has been said, it will be evident that the subjects represented in the tombs illustrated the customs and occupations of the Egyptians, while those in the temples related

principally to the duties of the king and of the priests, as well as to the deeds of the other most honoured class of the community—the soldiers.



(W. 95.)

The distinction of classes in Egypt was very marked, and after the king the priests and soldiers held the highest position, and may be considered the aristocracy of the country. The king was the chief of the state, and, in virtue of his office, was the head of the religion, of the law, and of the army. He was always either of the priestly, or of the military, class; and if not of the sacerdotal order before his coronation, he was admitted into it on ascending the throne, and instructed in all the secrets of religion; as the kings of Persia were by the Magi. He had also the right of presiding in the temple; and no other functionary offered sacrifices there, when he was present to perform that duty. Those engaged in trade, and various laborious pursuits, were in an inferior position to the two leading classes, and the occupation of each generally descended from father to son. But this was not exclusively so—as the son of a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priest might be in the army, or the son of a military man in the priesthood, and each might occupy a different grade from his father. The divisions of Egyptian society cannot, therefore, be said to correspond to the castes of India; and there is reason to believe that, occasionally, a man of talent might rise from a lower to a higher class. Indeed, Mr. Birch and M. Ampère may be said to have proved the non-existence of *castes* in Egypt.

Besides the subjects in the tombs relating to the customs of the Egyptians during their lifetime, are the funeral of the deceased, before mentioned, and the transport of the body in the *baris*, or boat, over the sacred lake, which is the origin of the Acherusian lake, the ferry-boat of Charon, and the passage of the Styx of Greek fable; and the memory of this important event is often alluded to, by the dedication of a wooden boat in the tomb.

Reference is also frequently made to the king in whose reign the owner of the tomb lived, particularly if he had held any office about the court. Sometimes the procession of foreign chiefs, bringing tribute to the Egyptian king, is represented; sometimes a young prince, seated on the knee of his tutor, or of his mother, is complimented on his future career by an allusion to the conquests he is to make over the enemies of Egypt, whom he holds in bonds beneath his feet; and various historical events are alluded to, though battle scenes and the victories of the king are confined to the temple.

The tomb was either made for a person during his lifetime, or was purchased by his family at his death; and ready-made tombs were kept for sale, in which the usual representations of general customs were already introduced; blanks being left for the name and for the portrait of the future occupant, as well as of his wife and children. Indeed, a trial in this world

might exclude him, or even a king who had led a glaringly bad life, from burial in his own sepulchre; and accusers were allowed at the day of the funeral to pronounce a condemnation here, which all agreed he would receive in a future state.

The last judgment is one of the principal subjects in the tombs. There the deeds of the deceased, typified by the heart (or the funeral vase that held it), are weighed by Anubis and Horus, against the ostrich feather, or the figure of the Goddess of Truth, placed in the opposite scale; in the presence of the forty-two assessors, whose office it was to examine the dead respecting the peculiar crimes they avenged, and which were forbidden by the Egyptian code of morality. Thoth (Mercury) then presents the account of this. "finding of the jury" to Osiris (the judge of the dead), who pronounces the favourable sentence admitting the virtuous into his presence in the "mansions of the blessed." There before the entrance sits Harpocrates, the type of youth and of new life; and a hideous monster (the prototype of Cerberus), sometimes called "the devourer of the wicked," guards the gate of "Amenti," or Hades. Within are the four genii, thought to preside over the different parts of the human body, standing before the throne of the judge, whose emblem, the spotted skin suspended to a cone-headed spear, gave rise to the *nebris* and *thyrsus* of Bacchus, to whom Osiris corresponded in Greek mythology.

The figure of Truth always holds a remarkable position in these scenes. She had a double capacity, as Truth and Justice, and her name Thmei appears to be the origin of the Hebrew *Thummim*, which is translated "Truth" in the Septuagint, and which in its plural form well accords with the double character of the Egyptian Thmei. She is also the Greek Themis. She

is sometimes figured "with her eyes closed," and sometimes (as Diodorus also describes her) "without a head." A further resemblance of the figure of Truth to the Thummim of the Jews was in its being worn by the Egyptian judge, and a breastplate is represented which seems to accord with both the Urim and Thummim; the other figure composing it being the sun, and Urim signifying "lights."

Each figure holds the *Tau*, or sign of life; which was adopted by some of the early Christians in the East in lieu of the cross; and which is mentioned in Ezekiel (ix. 4, 6) as the "mark" (*Tau*) "set upon the foreheads of the men" who were to be preserved alive. The old inscriptions of the Christians at the Great Oasis are headed by this symbol; and it has also been found on some of their monuments in Rome.

(W. 97.)

The western side of the Nile was considered most suitable for burial, and it is there that the Egyptians made the pyramids, the tombs of the Diospolite kings, and all the sepulchres of Thebes, Memphis, Abydus, and other chief cities; and if they departed from their custom in those of Beni Hassan and some more, it was because the eastern mountains were in those places near to, and the western inconveniently distant from, the Nile. Behind the western mountains of Thebes was the place of darkness, to which the sun retired after having run his daily course; it was the abode of Athor (Venus), who received the setting sun into her arms, and in this capacity answered to night; and the very name *Ement* ("west") was similar to the *Amenti*, or Hades, of the Egyptians.

The tombs of the kings present subjects mostly differing from those in the sepulchres of private individuals. They

relate to mythology, principally in its connexion with the dead; and much may some day be learnt from them respecting the mysterious views of the Egyptians. The astronomical ceilings, too, particularly in the so-called tomb of Memnon, may also prove of great importance, and it is to be regretted that they have been overlooked by the several government commissions sent to Egypt, for whom the task would be much better suited than for one individual. In the mysterious subjects on the walls snakes perform a distinguished part; some are guardians of the doors of certain mansions of Amenti, and the killing of "the Great Serpent" (the emblem of sin), the binding of the wicked, and their punishment in fire, are introduced.

There is a subject, repeated in more than one tomb, which is remarkable, not because, as erroneously supposed, it relates to the Jews, but because it represents the whole *human race;* as the customs of the people in the private tombs are an *epitome of Egyptian life.* Mankind is there figured as four races; and this division of the world reminds us of several allusions in the Bible, of which it will suffice here to notice the "four winds," and the "four corners" of the earth; according also with the "custom of the Egyptians, at the coronation of their kings, of sending forth four carrier-pigeons to announce that event to the "four winds," or, as we should say, to the "four quarters of the globe."

First, are four figures clad in long dresses, with feathers on their heads, representing the East (placed first from its being considered "the beginning of the world"). Their costume resembles that of the Rebo, an Asiatic people, against whom the Egyptians made several expeditions, and who appear to have been thought worthy of selection as the type of the East. They were tattooed; and among the marks on their legs,

and on their dresses, was a cross, which simple device was not uncommon in ancient Egyptian and other ornaments.

Next are the Negroes, called "*Nahsi*," representing the South; then a white people, with blue eyes, bushy light-coloured beards, and short dresses, the type of the North; and after them come four red men, representing Egypt (considered the centre of the world, and the pure nation), who are very appropriately followed and superintended by the god Re, the Sun.

These are a few of the principal subjects introduced in the paintings of the tombs.

Those in the temples are:—

1°. *Various religious ceremonies;* of which the most common are offerings to the chief deity and "the contemplar gods;" the worship of the triad of the city; the bringing in of the shrines, or arks, borne by numerous priests; the dedication of the temple; the coronation, the consecration, and the anointing of the king, (over whom the gods Horus and Seth are seen to pour alternate emblems of life and power, implying that mixture of good and evil which is inseparable from all human affairs); and some other ceremonies. The offerings to the gods are the most frequently repeated. They occur on the walls, columns, and most parts of the building; and the king has the privilege of officiating on all occasions. The deities are recognised by their different forms, and by the hieroglyphic legends over them. The gods hold in one hand the sacred *Tau*, or sign of life; in the other the sceptre of power, having the head of an animal and a forked base; which last part, made of bronze, has been more than once found at Thebes, and in one instance ornamented much more highly than in any representation on the monuments.

It is a curious fact, that the Arabs of the desert now use

a stick with a similar head, when riding a dromedary; and an Egyptian painting at the British Museum represents it in the hand of an ancient peasant, who is in a corn-field. Few goddesses, except Maut and Neith, hold this sceptre, theirs being in the form of the papyrus.

2°. *The victories of the Egyptians;* in which the conquests in Asia and Africa are recorded; the attack of the king on the enemy's fortified towns, and his victorious return to Egypt, bringing captives and spoil, which he dedicates to the god of the temple; the march of the army, with its foreign auxiliaries, all with their peculiar arms; the distribution of rewards to the troops; and the thanksgiving of the army for victory, headed by the priests, who perform sacrifices and libations to the gods.

The army is shown to have been regularly disciplined, and the Egyptian phalanx, so distinguished in the contest between Crœsus and Cyrus, is the first mentioned in history, and is represented on the monuments of the 18th dynasty.

In all these subjects the king, whether in his chariot or on foot, is the principal figure—conspicuous above all the rest by his colossal form, while his sons and other officers of his household, the troops, and the foreign foe are made to hold a subordinate position by their inferior size. Columns of hieroglyphics describe each picture, and the events it represents; and the same pictorial writing accompanies every offering to a god, or other sacred subject. They, too, like the scenes they describe, are coloured and form part of the whole painted building. For no part was left without colour. Even the columns, and the obelisks, the sphinxes that formed the approach to the entrance, and the outer gateway of the court that enclosed the temple, were coloured; and the banners on the flagstaffs that out-topped the lofty pyramidal towers, and

all the architectural details, were conspicuous with the same rich mode of decoration. Even granite was painted, except when the surface, well-polished, was thought to have sufficient effect in its own colour.

The historical subjects on the walls of the temple were those that chiefly excited the admiration of strangers in old times; and from them the priests read to Germanicus "the amount of tribute imposed on conquered nations," which was pronounced by Tacitus to have been "not less magnificent than that exacted by Parthian despotism, or levied by the power of Rome."

On the large pyramidal towers, forming the façade of the temple, the king generally slays a group of captives in the presence of the god, who, holding forth a falchion, says, "Take this, and smite with it the chiefs (heads) of the impure nations." This emblematic group is typical of the victory he has been permitted to obtain, and not, as some have supposed, a human sacrifice; for the advanced state of civilisation to which the Egyptians had arrived, which had taught them to lay aside their arms in the city, and which made them rescue from death, even in the heat of battle, those enemies whose galley had been upset, sufficiently proves that such representations were not offerings of human victims to a god; which is further confirmed by the Ptolemies having the same emblematic group on temples of their time. It is equally erroneous to call these *several* captives with uplifted arms *a figure* of Briareus. But of all the misconceptions of modern days the most extraordinary is that which sees in the "sacred sycamore" of Netpe (Rhea) the tree of the Garden of Eden; the goddess being innocently occupied in giving the fruit to the deserving dead; as Athor (Venus) gives it from the Persea; together with the drink of heaven,—the evident origin of the ambrosia and nectar of Greek fable.*

* See Manners and Customs of the Ancient Egyptians, Plates 32, 36a

Though the pyramidal towers are one of the most striking features of the Egyptian temple, they were wanting in early times; but the pyramidal or sloping line was a peculiarity of every building. Colossal dimensions have also been looked upon as an essential feature of Egyptian architecture; but its true character and object were strength and durability rather than size, and whether the monuments were large or small, these were always necessary conditions. Of the three prescribed by Vitruvius, "utility, strength, and beauty," Egyptian temples possess in an eminent degree the first as well as the second; and if the crude brick materials of houses were not equally durable, they were not wanting in strength, and might shame the ephemeral productions of modern civilisation.

It was not till the Egyptians had advanced considerably in wealth, and in the love of grandeur, that their temples became remarkable for their size, and the oldest were of moderate dimensions. It is, however, true, that size was a *tendency* of their taste; and the pyramids, which are the oldest monuments that remain, are of enormous magnitude. But these may not perhaps be admitted as specimens of a style of architecture; they are monumental, and many people erected large sepulchral monuments to the dead, long before they devised a system of architecture.

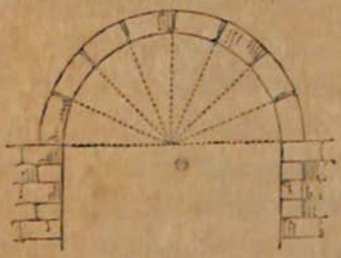
The smaller size of temples erected between the age of the pyramids and the eighteenth dynasty was not owing to any want of masonic skill, since the much older pyramids attest the perfect knowledge of all the principles of construction possessed centuries before by the Egyptians; and it is with amazement that we perceive how long they must have been previously acquainted with the use of squared stone, and even of squared granite the blocks of which are hewn, and fitted together in the interior with a precision which no modern or

ancient masonry could surpass. This, too, at least 4250 years ago.

Another feature of their sepulchral monuments was also absent from the temples; nor was it ever admitted into them, even in Roman times, except in some small out-of-the-way buildings in the desert. This was the arch, which was frequently employed in the tombs of Thebes, and which appears to have been first used for roofing the chambers of the crude brick pyramids near Memphis. It was also adopted in houses and granaries; and though chance has not preserved any one with its internal coating of stucco, bearing a king's name, before the time of Amunoph I., who reigned about 1500 years before the Christian era, there is reason to believe that it was common in the twelfth dynasty, and that its invention dates as early as the sixth, or about 2100 B.C. Its existence in the time of Amunoph is certain; and other arches have been found at Thebes, with the names of Thothmes III., and other kings of the same and the succeeding dynasty, painted on the stucco that lines them. Those, however, about the so-called Memnonium, are of a later, probably Christian, time.

The origin of the arch may be ascribed to the scarcity of wood fit for rafters; and the want of timber-trees in Egypt, together with the habit of building with crude brick, taxed the ingenuity of man to devise a method of constructing roofs with the same material as the walls. Similar instances of the influence of materials are not uncommon. The peculiar fracture of certain kinds of stone led to polygonal masonry; and the groined arches of Gothic churches, the round towers of brick or of flint, and other peculiarities of construction, have been indebted to materials for their principle and their form. Bricks, therefore, being called upon to complete the whole chamber, suggested the vaulted roof; and the size of some Egyptian

bricks, nearly one and a half foot long, eight inches broad, and five and a half inches thick, was a saving of labour in the construction. And in order to spare as much of the arch as possible, they were placed lengthways; the ends of the bricks being cut into a wedge shape, or the space left between their upper edges being filled in by a triangular piece of stone imbedded in the mud, that served for mortar. Either of these methods made up for the curve of the arch, and enabled the bricks to radiate to a common centre, on which, and not on the key-stone, the principle of an arch depends; for many arches, both round and pointed, have been built in modern ages without a keystone.

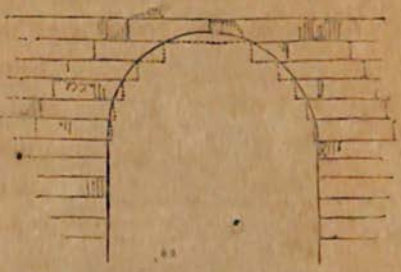


(W. 98.)

They afterwards improved upon their mode of placing the bricks, and arranged them side by side, as in modern buildings; and some of the double concentric arches, over the gateways before the tombs at Thebes, are as beautifully constructed as those of Roman, or of modern, times. They are of the age of Psammitichus and the other kings of the twenty-sixth dynasty, about 600 before our era. But many well-built arches were made on the old principle to a late time, and consisted of three or four concentric rows of bricks placed lengthways, with a sort of hood or drips one projecting beyond the level of the wall and the face of the archivolt (woodcut 99).

(W. 99.)

The oldest stone arches hitherto found in Egypt are of the same date, or about 600 B.C.; all those of earlier time being false arches, cut in the thickness of the overlapping stones: a mode of construction common also in Italy, and other countries at a remote age.



(W. 100.)

When they first began to use stone for real arches is uncertain; but it was evidently brick that first led to the invention. And it is a curious fact that those stone arches at the pyramids of Gebel Bérkel, in Ethiopia, imitate the old system, the blocks being placed lengthways, like the bricks of the earliest Egyptian vaults.

(W. 101.)

To bricks, indeed, various styles of building were indebted for their origin; they exerted very great influence on many kinds of architecture; and they were the earliest improvement on that primitive mode of construction, the mud wall.

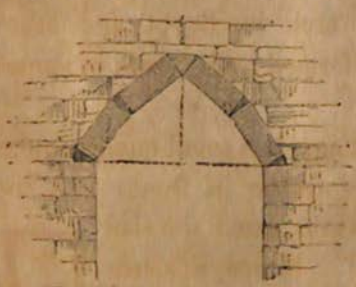
The Egyptians seem at first to have been afraid of roofing large spaces with the arch; and their vaulted tombs are seldom more than seven or ten feet in breadth, until the time of the twenty-sixth dynasty.

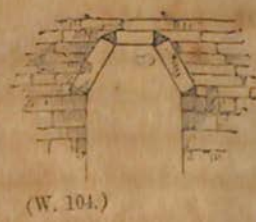
The same remark applies to the early pointed arches, built by the Christians in Egypt, dating about the seventh century, which are seldom more than two and a half feet in span. They were only used for covering narrow spaces, as staircases or niches,

and were formed of bricks placed lengthways, as in the earliest round arches. The two uppermost bricks usually met together in the centre, the key being formed of a triangular piece of stone or brick; and a still ruder kind of arch consisted of three bricks, with the centre one placed horizontally between the other two (woodcut 104).

(W. 102.)

But the pointed arch was not devised *in order* to cover small spaces, nor (as some have thought) because there was not room enough for placing a small round one on the same level with others of larger span; as this difficulty is more readily removed by the stilted round arch than by inventing a new one. Much less did it originate in the intersection of two round Norman arches, or in groined vaults, both which were unknown till long after the pointed arch had been commonly used in the East. A whole mosque still remains at Cairo, built by Sultan Ahmed ben-Tooloon, A. D. 879; the Cufic inscriptions at the Nilometer of Roda, opposite old Cairo, show, from their style, that its pointed arches are of a similarly remote period; and there is reason to believe that this kind of arch was used by the Arabs long before. It is also found covering one of the chambers before an Ethiopian pyramid, at Gebel Bérkel, built while the Romans were in Egypt. There is one with the keystone over a passage at Tusculum, at least as old as the days of the Latin


(W. 103.)


(W. 104.)

Confederation; another at Pompeii, and at Zindan, and at Ephesus; and future discoveries will doubtless prove that it was employed in the East before its adoption by the Saracens.

(W. 105.)

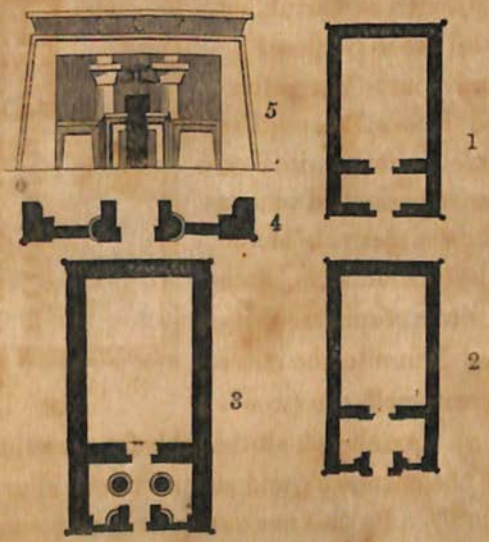
The arch seems to have been considered, by the Egyptians, particularly appropriate for the tomb; even the ceilings of many hewn in the rock were cut in imitation of it, as at Beni Hassan; and some of the oldest sepulchral chambers in the Great Pyramid had that peculiar mode of construction, which was the precursor of the arch in Egypt and other countries,—a pointed or pent roof formed by two sets of stones inclined towards each other.

The Egyptian temple was at first merely a small quadrangular chamber—a sanctuary with one entrance in front; and the same continued to be its form, however much the size of the sacred building increased. Hence a hieroglyphic, of the same form as its plan, was made to signify "temple," or "house."

(W. 106.)

Within this sanctuary was the statue of the god, and the altar for sacrifice or for libation; and to it the priests alone had access; the people, treated as the profane laity, remaining without, and only participating—or taught to believe that they participated—in the ceremonies through their priestly *vicars*. In process of time other chambers and a portico were added; and the approach to the body of the temple was through avenues of sphinxes, and a succession of courts, well suited for the grand processions in which the Egyptians delighted, and by which the priests sought to impress that superstitious people with the importance of their office.

The first change in the simple single-chambered temple was the addition of an ante-room or porch (fig. 1); the next was to replace the outer wall of that porch by two columns united to the side walls by a low screen (figs. 2, 3, 4, 5); and

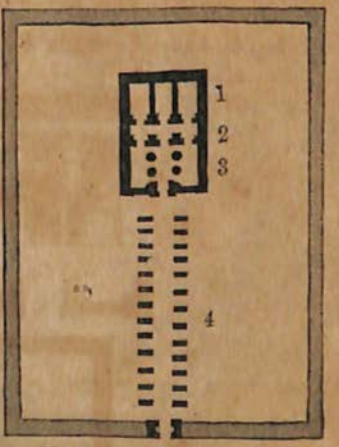


(W. 107.)

two or more inner columns having been introduced, the porch assumed the character of a spacious portico. Another change was the introduction of three sanctuaries, corresponding to the number of the three members of the Triad of each town; and before these was a transverse corridor (woodcut 108, fig. 2, and 109, fig. 2), analogous to the original ante-room of the earlier sanctuary, separating them from the portico. An avenue of sphinxes was also added to form the approach from the stone gateway (or *pylon*) in front (woodcut 108, fig. 7), which was the entrance to the crude brick enclosure, in which the temple stood.

This enclosure was planted with trees and constituted the sacred "grove," or *temenos*. It was laid out in numerous shady

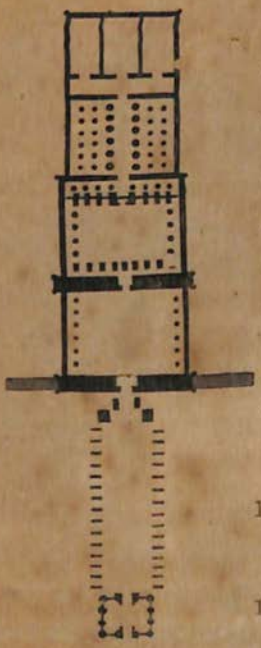
avenues; and sometimes a large reservoir cased with stone, having a spacious double flight of steps leading down to it, afforded a plentiful supply of water for the use of the temple, for watering the trees, sprinkling the walks, and other purposes.



(W. 108.)

One or two courts were afterwards added before the portico, as the temple increased in size, and two massive pyramidal towers were placed on either side of the *pylon* at the entrance of each court; the avenue of sphinxes connecting it as before to the outer gate of the great enclosure (woodcut 109, fig. 8). An obelisk also stood before the outer towers on each side of the entrance; and statues of the king at the inner doorway (fig. 9). By this more extended arrangement, the portico was converted into a spacious hall of columns, where the great assemblies were held at stated periods under the presidency of the king; and two sets of columns at the upper end of the inner court, with screens uniting the front row, then served as the portico (fig. 4). This was the ordinary arrangement of a large temple; but other chambers and halls were sometimes added between the hall of columns and the sanctuary; and when many kings wished to honour the god by successive additions to the same temple, lateral courts with pyramidal towers were appended at the side, forming new approaches on the right and left. Before the gate of the enclosure was a paved road, sometimes with another avenue of sphinxes (the emblems of the king), or of rams, or lions, leading to a square building open at the top, and consisting merely of columns,

supporting an entablature, composed of the usual architrave and cornice, and frequently decorated with a row of asps along the summit (fig. 11, and woodcut 110). The columns were united by stone screens, reaching half-way up the shaft, which were by no means a late introduction, having been used in the reigns of the second and third Remeses; and as it stood on a raised platform—one or sometimes several steps—led up to the doorways placed at each end. It was the place of meeting, whence the priests marched in procession to the temple, bearing the sacred ark, with various banners and holy emblems, on the days of grand ceremony. (*See Frontispiece Popular Account of the Ancient Egyptians.*)



(W. 109.)

Passing through the sacred enclosure, and entering the first *pylon* between the front towers, you came to a large open court, about 140 feet by 1[illegible] (woodcut 109, fig. 7), having on each side a covered corridor formed by one row of columns, supporting a flat roof, painted as usual with white, or gold, stars on an azure ground, representing the heavens; and so brilliant was the blue they used, and so clear the Egyptian sky, that little difference could be distinguished between the colour of the two, when the light struck on the ceiling.

The next was about the same size as the outer court; and the height of both, which depended on the dimensions of the building, was about thirty feet from the ground to the top of the cornice, or roof, of the corridor. The entrance to this, as

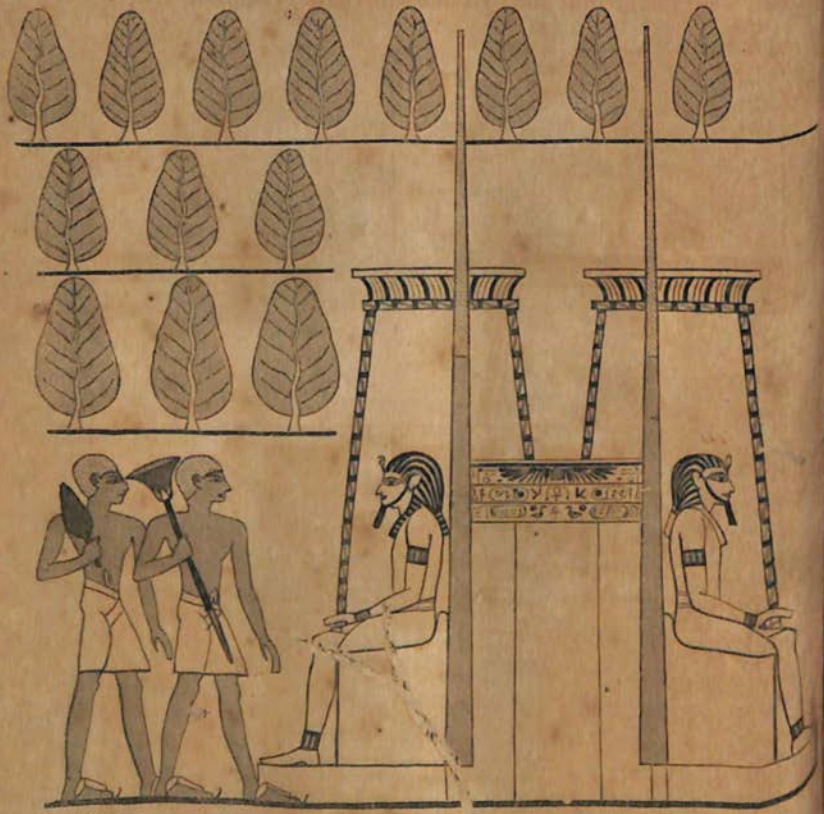
to the outer court, was through a *pylon*, or gateway, between two other pyramidal towers (6), like the first, about forty or fifty feet high, and decorated also with lofty flagstaffs bearing

(W. 110.)

red and white banners. These have even been found represented in the paintings, with the statues of the king seated before the gateway, between them; though, with an Egyptian dislike to a front view of the human figure, these last are drawn in profile (woodcut 111).

On passing this gateway you entered the inner court (5); which, in addition to the colonnades at the sides, had a covered corridor at the two ends, supported on Osiride pillars, representing the king in the form of Osiris. The centre part was open to the air; and at the upper end was an inner row of columns, behind the Osiride pillars, separated from the open part by stone screens (4), which, as I before stated, served in lieu of a portico. Beyond it was the hall of assembly (3), entirely covered over, with a flat roof supported on numerous columns, which in the centre avenue were much higher than those to the right and left, and of an different order, having bell-shaped

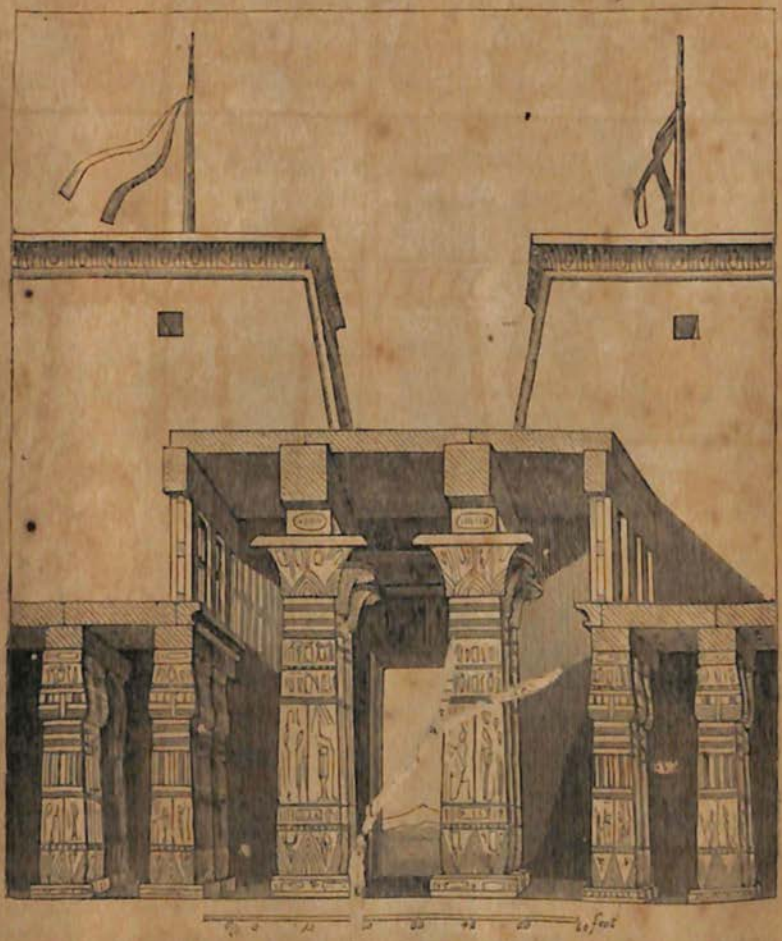
capitals, representing the head of the full-blown papyrus. The others were in the form of buds of a water-plant; and the



(W. 111.)

difference of height in the columns gave room for a row of windows in an attic over the centre, to light that part of the hall. This is the Egyptian style of building described by Vitruvius, with windows between the upper pillars, as in a basilica.

Beyond this were other chambers, varying in size and number according to the dimensions of the temple; and at the extreme end were the central and two side sanctuaries (woodcut 109, b).



(W. 112.)

This part of the building (which may be said to correspond to the chancel of our churches) was rather less in breadth and much lower than the hall, portico, and areas; and an appearance

of greater length was given to the whole temple by a false perspective, each door being smaller and smaller as you approached the sanctuary.

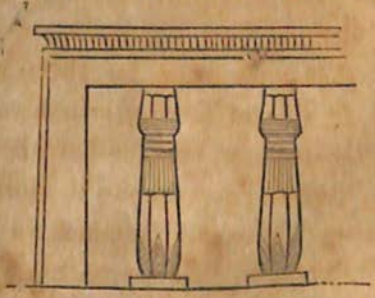
In older times the temple was not furnished with pyramidal towers; these were first added for defence, as well as for architectural effect, by the kings of the eighteenth dynasty, and each temple with its wall of enclosure then became a detached fort. The city was therefore unwalled. The temple contained the statues of the gods, the gold and silver utensils for religious purposes, the treasury, and the abode of the king; so that all that was most precious was protected; and it required a smaller number of men to garrison it than a walled town. And though the fortresses on the frontier were still kept up, and a few towns, in defiles at the edge of the desert, still continued to be walled, none were then built in the interior of the country; nor were the capitals — Thebes and Memphis — surrounded by walls. "The hundred gates of Thebes" do not, therefore, signify those of the city, but of the courts attached to its numerous temples; which were certainly more likely to furnish that number of gates than a city wall; and this is even stated by Diodorus.

The origin of Egyptian architecture has been erroneously derived from excavations made in the rock; but it is obvious that men made for themselves huts long before they were capable of hewing chambers in stone. They found no ready-made caves, such as have been invented for the fabulous Troglodytæ; and despite the authority of Bruce, I believe their low mud huts, still common in Africa, led to their name, and to the story. Nor were the Egyptians in the habit of living in caves after they knew how to make them; and their excavations in the rock were always intended for tombs or temples. They were also invariably imitations of *constructed* monuments.

The form and mouldings of the primitive temple and house were derived from the nature of their construction. The walls were of mud—afterwards succeeded by crude brick—with a framework of reeds bound together, extending up the ends and over the top; which was the origin of the torus in the stone temples. This held the same position there, and even the old binding of the reeds was imitated; which was so like that of the Roman fasces (see woodcut 111). Above the upper line of the framework was the roof, composed of rafters with rushes, reeds, or branches of the date-tree laid over them (and coated over with a layer of mud), which, overhanging the rafters, gave rise to the projecting summit, or *regula*, of the cornice. Though at first very simple, this was soon varied into that overhanging curve which was so graceful a feature of Egyptian buildings, and was imitated by the Greeks; but the *lowness* of the early cornice still continued to be a marked feature of the oldest temples, and it only attained great height in those built after the accession of the Ptolemies. This curve, which is the same as in the bell-shaped capital, appears to have been taken from the flower-head of that favourite plant of the Egyptians, the papyrus.

(W. 113.)

No member intervened between the torus-framework and the cornice, except over columns; and the architrave was there "the mainbeam" from one column to another.



(W. 111.)

In order to strengthen the wall over a doorway, a beam of wood was let into it, and the jambs were upright posts on which the lintel rested; and sometimes, besides the framework and flat beams, the doorway had a round log for its lintel, which was thought stronger than cut wood (fig. 1).

(W. 115.) 1 2 3

The framework over the doorway was afterwards of a more complicated and ornamental kind, and richly coloured; and the dead-wall at the sides of a building was sometimes relieved by panels, or by a sort of niche, either in brickwork or in stone

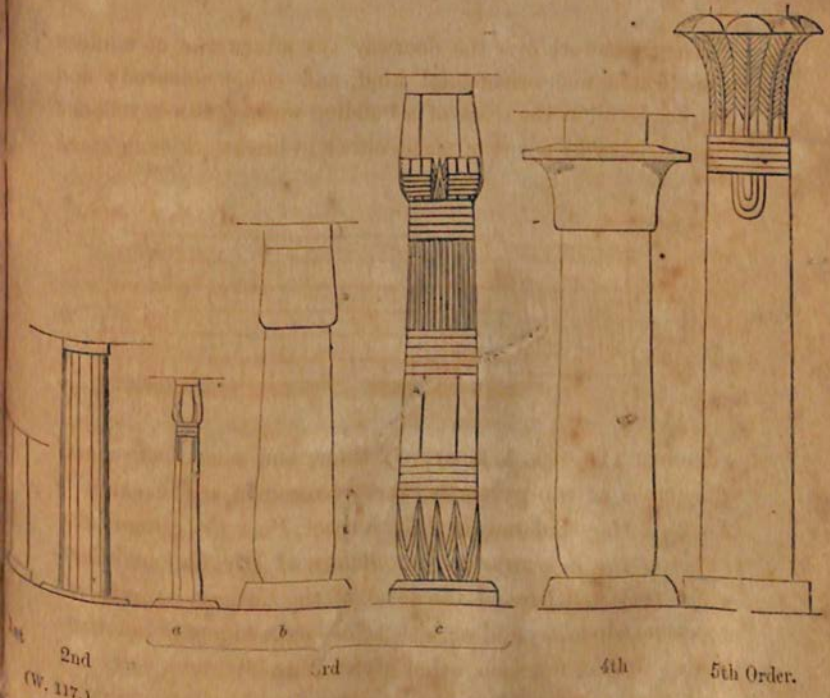
(W. 116.)

(woodcut 116, figs. 1, 2, 3). If these, and some doorways of the tombs at the pyramids, were recessed in the thickness of the wall, they differed, in this respect, from the general character of the doorways and mouldings of Egyptian buildings, which projected beyond the level of the surface; as in Greek doors and windows; and were therefore unlike those of Lombard, Italian-Gothic, and some other styles of architecture.

Another ornament over the doorway, found even in buildings

of the fourth dynasty, was the cornice with an overhanging curve, like that of the roof. At first, it surmounted the framework (woodcut 115, fig. 2), but, in process of time, the latter began to be omitted, and the doorway was then permitted to consist merely of the cornice, lintel, and jambs; generally with the winged globe on the upper moulding (woodcut 115, fig. 3).

The pyramidal, or sloping, line was intended to insure the durability of a wall, and as the above-mentioned members are evidently derived from a constructed building, so too the sloping line could only come from the same origin, being quite



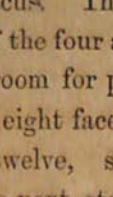
6th (W. 117 *a*.) 7th 8th Order.

inconsistent with an excavation. The internal walls of rock-monuments, like those of every chamber *within* a temple, were, of course, perpendicular, as were the *inner* sides of the jambs of all doorways; but when the *outer* sides of the jambs of the doorways in excavated temples and tombs inclined, they evidently imitated constructed buildings. One feature, however, *was* derived from the quarry. This was the pillar. It was taken from the mass left to support the roof of rock, and was square, because the blocks were hewn of quadrangular shape.

But here the obligation ceased; and the built temple soon amply repaid the obligation, by giving back to excavated monuments the water-plant, palm-tree, and other columns, with the architrave, plinth, abacus, and other members that could only originate in constructed work.

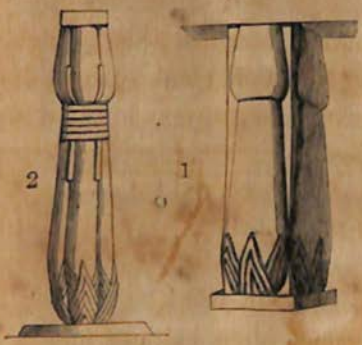
Egyptian columns may be divided into eight principal Orders:—1. The square pillar; 2. The polygonal and the fluted column; 3. That with a bud capital; 4. That with the bell-shaped, or full-blown, papyrus capital; 5. The palm-tree column; 6. That with the Isis-head capital; 7. The Composite Order, with capitals of various shapes, comprising the full-blown lotus, sometimes surmounted by the head of Isis and various fanciful forms; 8. The Osiride Order, which had sometimes the figure of a king in the form of Osiris, sometimes a Typhonian monster attached to a square pillar.

Egyptian columns often borrowed from each other; and though the last Orders differ so widely from the square pillar, and from the polygonal column, the original relationship even of these may still be traced. The square pillar was the oldest; it continued, however, to be used in tombs, in covered courts, and in the peristyles of temples, even after the invention of the round column. It had frequently a plinth, or base, but rarely a capital and abacus. The polygonal column was formed from it, by cutting off the four angles (fig. 2); which was done in order to give more room for passage in crowded spaces; and its eight faces were afterwards increased to twelve, sixteen, twenty, and thirty-two. The next step was to hollow out these faces, or facettes, into grooves; and the only trace of the original unfluted column was then the central facette, which was left flat in order to receive a line of hieroglyphics. Such was the gradual formation



(W. 118.)

of the *fluted* shaft; which was evidently the prototype of the Greek Doric.



(W. 119.)

It may seem strange that the next, or third, Order, should have been devised by the same people who had invented the polygonal and fluted column. But the transition from the square pillar was as simple to the third, as to the second, Order. The pillars had always been painted with various devices, among which plants were the most common; these were afterwards sculptured in relief; and, at length, when convenience required the angles to be removed, the pillar was cut away into the form of the plants hitherto sculptured upon its four sides (woodcut 119, fig. 1); and the four plants alone being left (fig. 2), were represented bound together to account for their position, and to complete the illusion.

This idea being once adopted, other combinations arose; and Isis heads were mere additions to the round shaft, as the Osiride figure was an appendage to the old square pillar (woodcut 117 *a*, Order 8th). The size, too, could be increased *ad libitum;* from small columns such as that at the British Museum, fourteen or fifteen feet high, to those at Karnak measuring nearly forty feet; while the other columns of the fourth Order rose, as at Karnak, to upwards of sixty feet in height.

In the water-plant columns of the third Order, the shaft was either composed of four plants, or of a single one; but at the lower part were always represented the sheaths that envelope

the bottom of the papyrus stalk in nature; and this was even introduced in the palm-tree shaft, which shows, either that the fifth Order was of later date than the third; or, at least, that it borrowed from it.

The papyrus column of the fourth Order had this by right; the third and fourth representing the same plant in bud, and in blossom: and their resemblance to the papyrus in those two states may be readily recognised. The triangular form of the stem is also indicated in the shaft, as at the Memnonium.

(W. 120.)

In the fifth Order may be included the column with a feather-like capital, often imitated in glazed pottery, and even found in the paintings of the twelfth dynasty (woodcut 120).

The oldest instance of a column of the fourth Order is about the age of the eleventh dynasty.

The sixth is best known from the portico of Dendera; and the seventh, which may be called the Composite, includes within it columns with the most varied and highly ornamented capitals; which increased in number under the Ptolemies and Cæsars, though [illegible] perfectly Egyptian; and in this Order may be classed the volute-headed column, which was of great antiquity, at least as early as the beginning of the eighteenth dynasty, and which was derived from the water-plant typical of Upper, as the papyrus was of Lower Egypt (woodcut 121, figs. 1, 3).

(W. 121.)

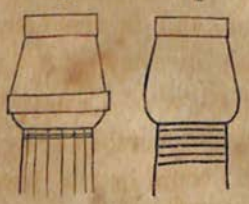
There was also a fanciful pilaster, surmounted by a cow's head, in lieu of a capital; instances of which occur on each side of the entrance to the tomb of Remeses III., at Thebes;

recalling the cow-headed columns found at Delos, given in Stuart and Rivett's Athens (Suppl. Vol. p. 20).

It is sufficiently evident that the Egyptians were not fond of uniformity, as some have imagined; for though their architecture had a marked character, its component parts and accessories were very varied; and their fondness for variety is shown in the juxta-position of columns of different Orders; which was at last carried to such an extreme, that no two adjacent capitals were alike in the same portico.

In the oldest monuments of the third and fourth dynasties, about Memphis and the pyramids, certain ornaments and mouldings were in vogue, which are seldom found at Thebes; but these are owing quite as much to local taste as to early date; and it was not till the eighteenth dynasty had united all Egypt under one king, that the same uniformity of style prevailed throughout the country. All, however, was of the same general character.

The interest that attaches to their architecture is greatly increased by our knowing that the Egyptians being long the leading nation of antiquity, and the one to whom others, and particularly the Greeks, looked during their early career for instruction, much was adopted from them which was afterwards carried to perfection by that highly gifted race.



(W. 122.)

Among the peculiarities in architecture, borrowed by the Greeks from Egypt, may be mentioned: 1°. the *polygonal* column with its shallow flutes, the origin of the Doric shaft. 2°. The *annuli* taken from the five bands round the neck of the Egyptian clustered column, composed of four water-plants *bound* together—an evident imitation, as the Greek shaft had *nothing* to *bind*.

3°. The Doric capital from the bud of the Egyptian, with the abacus lowered to the curve of its base, which has been fully confirmed by the Egyptian columns of the same form, found by Mr. Falkener, in the temple of the lake at Karnak (see Mus. Class. Antiq., vol. i. p. 87). 4°. The ninepin-shaped shaft, as at Pæstum, derived from the extravagant swell of the Egyptian bud column; which was imitated also by the Romans at the Amphitheatrum Castrense at Rome. 5°. The Mutules, copied from the rafters of a *flat* roof (not

(W. 123.) 1 2 3

from the pent roof of Greece), which are seen in the façade of a rock-tomb at Beni Hassan. 6°. The Ionic volutes, taken from the water-plant column (common on Egyptian canopies as early as the sixteenth century before our era), which has the pendent ornament at the corner, introduced behind the Ionic volute; and here we see the graceful change made from the clumsy Egyptian form to the festoon shaft of the Attic Ionic, with its *epitrachelion* substituted for the Egyptian bands round the neck of the shaft (*see* above, p. 156, and woodcuts 121, figs. 1, 3, and 123, figs. 1, 2). A volute ornament is also the emblem of Astarte, the Phœnician Venus, and is the same as that of Egypt (when drawn in outline) inverted (fig. 3); and its presence at the Druidical-looking ruins of Crendi, in Malta, seems to show their connection with the worship of that goddess. A sceptre, too, of the same form occurs in the hand of Astarte on Phœnician coins. 7°. The basket capital; the oldest form of what afterwards became the Corinthian; which is found at the Tower of the Winds, and at the Acropolis, in

Athens, and was borrowed from the bell-shaped capital of Egypt.* For, however we may admire the beautiful tale of its invention from the basket and acanthus leaf, we readily perceive its real origin; and the whole history of architecture clearly shows how one style after another has borrowed from a predecessor. (See, also, the fragment found at Delphi, in Stuart and Rivett's Athens, Suppl. Vol., p. 34, pl. 2). 8°. The curve of the cornice, borrowed from that of Egypt. The *antefixæ* only bear an accidental resemblance to the row of asps. 9°. The triglyphs

(W. 124.)

(W. 125.)

and Metopes; which were a common ornament of an Egyptian temple (woodcut 125). They were, as usual, so far changed by the Greeks, as to present a new character; but the opinion that those over the so-called tombs of the kings, near Jerusalem, were of any other than Greek origin, is utterly untenable.

10°. The band round the torus, as at the Parthenon, perhaps modified from that of Egypt (above, p. 146, woodcut, and p. 148).

(W. 126.)

11°. The guilloche, the scroll pattern, the zig-zag or chevron, and others so common on the oldest Egyptian ceilings and vases. (See above, p. 42 to 46.)

12°. The Greeks, too, borrowed sphinxes, and various conventional designs, common on their old vases, as the

* There is another proof of the bell-shaped capitals of Greece, the parents of the Corinthian, having been derived from Egypt, in those of the "Treasury of Atreus," given in "Stuart and Rivett's Athens," Suppl. Vol., Mycenæ, Pl. V.

winged griffin, and the lotus, and even the goose and sun with

1

2

3

(W. 127.)

the Egyptian hieroglyphical zigzag (woodcut 126)—first pointed out by Mr. Stuart Poole—and the ibex, and leopard. They also took the harpy from the Egyptian soul flying from the dead—the *Háma*, or *Sada*, of the Arabs when Pagans, (woodcut 127); and the eye, so full of meaning in Egypt, but quite unconnected with Greek fable, was Egyptian.

(W. 128.)

13° The Medusa, with protruded tongue, as in the Metopes of Selinus, was the coun-

terpart of the Typhonian monster of Egypt (woodcut 128, fig. 2); and was probably connected with the introduction of the horse from Libya into Greece; for Neptune was Lybian.

14°. The Minotaur was from the bull-headed human figure of Apis; which guardian of the Cretan labyrinth (also borrowed from Egypt) has been strangely enough mistaken, on the Chiusi vase, for "Anubis."

15°. The Hermes statues were from the mummy-form figures of Osiris and other Egyptian gods.

16°. The Caryatides, from the Osiride pillars of Egypt.

17°. The Pyramidal, or sloping line, adopted particularly in the jambs of Greek doors and windows.

18°. The bevelled edges of hewn stone, which were used in Egypt even in the granite casing of the third pyramid; and which were afterwards adopted also in Syria.

Nor were these the only instances of imitation from Egypt. Many religious rites and mythological fables were borrowed by the Greeks from the same source. The thyrsus, and spotted skin of the fawn, as well as the leopards of Bacchus, may be traced to the ceremonies of Osiris; and Plutarch, in speaking of the Egyptian priests at the funeral of Apis, "dressed in the spotted skins of fawns, bearing the thyrsus in their hands, uttering the same cries, and making the same gesticulations as the votaries of Bacchus, during the ceremonies in honour of that god," plainly had in view the Egyptian priests clad in leopard skins, as well as the rites of Osiris. The story of the Styx, with all the *dramatis personæ* of Elysium; the battle of the giants and the gods; and the fable of the Serpent Python and Apollo, taken from the giant Aphophis—"that great serpent" pierced by the spear of Horus, the Apollo of Egypt; and many other Greek myths, some of which are noticed by Herodotus, Diodorus, and other writers, are also unmistakeably Egyptian.

Even the almost unaltered names of some proclaim their parentage; as the Greek Themis, derived from Thmei, the Egyptian Goddess of Justice; and the steersman Charon, and the judges of Hades—Minos and Rhad-*amanthus*—show their connection with the *Amenti*, or Hades of Egypt. (See above, pp. 129, 131.)

When Greece first borrowed from the Egyptians, it was in its infancy; and as in all times the dominant race has led the fashion both in art and conventional customs, we are not surprised to find an Egyptian element in the vases, and the various creations of decorative taste, in Greece and Etruria, or even in Assyria.

It is by watching the mode of adopting and modifying certain features of taste they borrowed from others, that we understand the process by which the Greeks improved on the productions of other people less gifted than themselves; and how their quick perception of the beautiful taught them to choose what was worthy of adoption. This appreciation of the beautiful, and the talent of adopting and adapting it, are merits which modern aspirants to taste would do well to acquire, instead of striving to obtain the merit of invention, and thinking more of novelty than excellence. The mere consideration of the rise and progress of different styles of architecture, as well as of different arts, will suffice to show how much more is the result of adaptation than of invention. Thus, as the Greeks adopted certain architectural features from those of Egypt, the Etruscans and Romans imitated the Greeks; the early Saracens again copied simple Roman buildings, as they afterwards borrowed from the richer Byzantine and Persian styles. Thus, too, the pointed arch (the earliest instances of which are found in a mosque at Cairo, dating A. D. 886), supposed to be a Saracenic invention, will doubtless prove to be derived from

some older Eastern monuments; as the cupola, and the rich golden mosaics of Syria, were from the Byzantine style. This last also contributed largely to the early church architecture of Italy, giving to it the cupola, mosaics, and other peculiarities; which were themselves borrowed from the golden domes of Rome, and were even found (according to Pliny) in the splendid palace of the king of Colchis. But, if not its inventors, the Saracens were the first to make known the pointed arch to the architects of Europe; and the builders of the thirteenth and following centuries benefitted, like their predecessors, by the hints derived from those of other people; which were adopted and made their own without derogating from the excellence of the new style, and without their builders thinking themselves degraded by adopting what was beautiful and suited to their wants. This was adaptation, not mere imitation. The knowledge of this important difference, and the taste required to carry out their own ideas, prevented their being mere copyists, and enabled each to create a new style; and the same remodelling of previous ideas may be seen in the works of men of talent in all ages; innumerable instances of which occur in poetry, science, painting, and all branches of art.

At no time perhaps has a better opportunity of drawing attention to this interesting fact been offered than the present; when the Crystal Palace of Sydenham has brought together the different styles of architecture, enabling us to trace the principal gradations through which they passed, and some of the numerous obligations that each owed to its predecessor.

The customs of the Egyptians varied of course at different periods, as they advanced in civilisation and in artificial wants; but it is remarkable how slight the changes were during the periods in which we are acquainted with them; and how much the customs of this "conservative" and cautious people,

in the time of the third and fourth dynasties, resembled those of the eighteenth and nineteenth, when their civilisation and power were at their zenith. Their dresses were the same; they had not large wigs with flowing robes in one age, and long hair with tight dresses at another; nor was there an "old school" in Egyptian society. Changes took place in increased splendour and luxury; in the details and dimensions of buildings, and in the improvements inseparable from advancement; but the archaic style of Egyptian art and of Egyptian manners are of such remote antiquity, that neither can be traced on any existing monument. We have no evidence of their infancy as a nation; and this fact leaves us to imagine the remoteness of the period, when the Egyptians were in a barbarous and primitive condition.

In giving this summary of Egyptian customs, and the principal subjects on the monuments, I have necessarily introduced much that has been already more fully mentioned in the "Popular Account of the Ancient Egyptians;" but being now limited to space, I have omitted all details, and must refer for them to that work; of which this may also serve as an appendix, from the introduction of some new matter, and illustrations.

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END OF SIR GARDNER WILKINSON'S DOMESTIC HABITS OF THE ANCIENT EGYPTIANS.

INTRODUCTION TO THE STUDY

OF

THE EGYPTIAN HIEROGLYPHS.

By SAMUEL BIRCH.

CONTENTS.

DEFINITION—invention—known to the Jews.—Greek—Democritus—Manetho—Chæremon.—Romans—Pliny—Christian writers—Clemens.—Porphyry.—Hermetic books—royal and priestly authors—their contents—revival of learning—early monumental publications—travellers—vain attempts at interpreting them, by Kircher and others.—French expedition to Egypt.—Renewed attempts to decipher—De Sacy—Akerblad—erroneous notions in Europe—Young—Champollion—mode of deciphering—Seyffarth—Wilkinson—Klaproth—Rosellini—Salvolini—Bunsen—Lepsius—School of Champollion—Kinds of Hieroglyphs—sculptured, written, and painted—arrangement—their number—objects selected.—Ideographs—determinatives—analysis and interpretation of ideographs.—Phonetic hieroglyphs, how selected.—General alphabet and syllabarium—how explained—various powers of phonetic hieroglyphs—proportion of phonetic—later alphabet—not often explained by Coptic, but by the context—no text of pure phonetics.—Relation of the language to the Coptic—Hebrew and English—Greek and Latin—Semitic and Indo-Germanic languages.—Grammar—nouns, verbs, prepositions, and adverbs.—Syntax—style of writing—antithesis, paraphrasis, high style, descriptive, religious, dialogue, epistolary, poetry, monumental style, explanations—official inscriptions—the Ritual—Hieratic writing—contents of papyri—ancient books, letters, rescripts, poems, and novels.—Demotic writing, deeds of sale, epistles, accounts, rituals.

HIEROGLYPHS.

THE term hieroglyph, which literally means "sacred sculpture," was applied by the ancients to those representations by which the Egyptians expressed their language, from the idea that they were restricted to sacred subjects. They are now well known as defining the various forms, either sculptured or painted upon stone and other substances, which served the Egyptians for writing, and they were long supposed to belong to the general class of *symbols*. In fact, they are little pictures or miniatures of things, and are supposed to have originated in picture-writing, by which ideas were conveyed either by mimic representations of entire objects, or of parts of them to express the whole, or by using them to convey other ideas by allusion or metaphor. According to the principal authors of classical antiquity, the Egyptians possessed two kinds of writing—the *sacred writing*,[1] or so-called hierographic,[2] the writing of the gods,[3] or hieroglyphic,[4] and the *popular writing*, called demotic,[5] or demode,[6] enchorial,[7] or epistolary.[8] Clemens Alexandrinus calls one the *hieratic*, or sacerdotal manner of writing; the other, *epistolographic*, or epistolary.

[1] Herodot. ii. 36. Diodorus, iii. 3. Rosetta Stone, l. 54. Greek Version.
[2] Manetho, apud Syncell. Chron. 40. [3] Ibid.
[4] Clemens Alex. Strom. v. 657. [5] Herodot. ii. 86.
[6] Diod. l. iii. 3. [7] Rosetta Stone, l. 54. Inscr. of Turin.
[8] Clemens Alex. Strom. v. 657. Lepsius, Annales d'Instit. Archéol. 1837, p. 18.

The first method represents the ideas intended to be conveyed, not by the abstract marks which we call letters, but by depicting in regular order the representations of all kinds of objects of nature and art. The Egyptian, beholding the starry vault of heaven—man in his various relations—the infinite realms of nature—the numerous utensils and products of art—endeavoured, by a series of mimic pictures, to transmit to posterity, or to convey to the knowledge of the present, the records of the past by sculpturing and inscribing them. To these speaking forms they had given an organisation, so as to render them capable of distinctly expressing the required series of ideas. This plan consisted in an improved development of picture-writing, of which there are two other distinct traces in the world; the Mexican, a picture-writing in its most primitive form, with no distinct organisation, and the Chinese, which is even further advanced in structure than the Egyptian, the forms often representing sounds only, and always being formed in a manner quite conventional. The hieroglyphs were divided into two classes, those which represented ideas, called *ideographs*, or pictures of ideas, and those expressive of sound, called *phonetics*. The first belonged to the order of picture-writing, but the second formed a syllabarium, perfect as far as the Egyptian language, or "sacred dialect," was concerned. It is of course highly probable that at one time the language was entirely composed of pictures or ideographs; but all the monuments, even those of the most remote antiquity, exhibit the two kinds mingled together in the inscriptions, and the age of pure picture-writing is one to which it is not possible to reach except by induction. Their invention was attributed to the gods themselves. Plutarch, indeed, seems to have been aware of an Egyptian alphabet. "Hermias," he says, "informs us that Hermes was the inventor of letters in Egypt. Thus, to

represent the first letter, the Egyptian figured an ibis, a bird which belongs to Hermes;" [1] which is actually the fact, as the ibis is formed equivalent to the word Aah (the moon), or the letter A, as it sometimes occurs in the name of the god Thoth or Hermes.

Hermes or Thoth, according to Diodorus, was the scribe of Osiris and the inventor of letters; [2] and the same is stated in the false Sanchoniatho.[3] In the hieroglyphic legends or titles of this deity he is called "scribe of the daimons and lord of hieroglyphs," or the "words of the gods." As these hieroglyphs were used at a very early period, and the old formulæ were implicitly copied in later times, they formed a language as different from that ordinarily spoken as Sanscrit from Praerit or the Chinese of Confucius from the colloquial. Hence it is spoken of as the sacred dialect; while the language in later use is called the common dialect. These dialects, or the old and modern language, differing in some particulars, belong to a spoken language intermediate between the Semitic and Indo-Germanic. Their structure, indeed, resembles the Semitic family, approaching the Chaldee and the Hebrew; but the words of which the body of the language is composed are many of them traceable to Indo-Germanic roots. The first, that in which the religious formulæ are drawn up, and which may be called the sacred dialect, is used throughout in inscriptions of grave style; the other, which reproduces the speeches and addresses, is the colloquial, and nearer in its construction to the Coptic. A few words, chiefly of the Aramæan language, appear at the time of the nineteenth dynasty.

Although the spoken language was of the Semitic branch, it

[1] Symbol. ix. 1. [2] Cory. Fragments, 8, 9.

[3] Some have supposed it to be pre-Adamite. Smith, Dissert., &c.; 8vo. 1842.

was by no means intelligible to the Hebrews: Joseph conversed with his brothers by means of an interpreter; and the tongue of Egypt is always mentioned as foreign, strange, or unintelligible. Only very obscure allusions to the hieroglyphs occur in the Scriptures, although the older portions contain many words of Egyptian etymology.[1]

It is not, however, to be supposed that so intellectual and inquisitive a people as the Greeks were entirely unacquainted with the curious phenomena of the hieroglyphical language of Egypt. As soon as the Greek factories on the coast had risen to importance, the complicated relations of the two people had created a race apparently of half-castes, who, like the linguists of the Chinese and the dragomans of the Turks, acted as interpreters between Greeks and Egyptians. The employment of Greek mercenaries, "the brazen men," designated by the oracle to Psammetichus, opened a new era in the relations of Egypt; and when the Persians had overrun the country, and reduced it under their sway, the more compendious form of writing, called the demotic, or enchorial, introduced for commercial and legal purposes about two centuries before, was in common use for the transactions of life. So easy had the intercourse become, that the early travellers, Hecatæus (B.C. 521) and Herodotus (B.C. 456), who, under the protection of the Persians, were enabled to traverse the country in safety, had no difficulty in holding, through their interpreters, conversations even with learned priests, or of obtaining translations, whether of public inscriptions or of rolls of papyri.

If, however, little attention was paid to the curious archaism of a language so essentially distinct, it was owing to the low estimation in which philology and the study of languages

[1] Mr. Williams, Essay on the Hieroglyphics, 8vo, London, 1836, conjectures the language to be Hebrew.

was held by the Greeks. How slowly, indeed, even at the present day, has the study advanced! How many travellers have traversed the land of Egypt since the revival of learning; how few, even of the most eminent, have copied a line of hieroglyphs with accuracy, still less analysed them with success! The later philosophical school, indeed, had studied deeply the philosophy and sciences of Egypt, and must have been aware of the nature of the language in which they were couched. Democritus, one of the early Ionic writers, who flourished in the XXX. Olympiad (B.C. 459), had written a dissertation on the sacred characters in Meroe, and on those upon the obelisk of King Achicharas[1] at Babylon. Neither of these dissertations has remained; and it was not till the time of the Ptolemies that any serious study of the language was commenced. At the beginning of the reign of Philadelphus, the Greeks were completely aroused to the importance of paying attention to the language. Eratosthenes, who was keeper of the Alexandrian library, has left behind a list of kings, accompanied by translations of their names. Manetho, the learned priest of Sebennytus, had been employed to draw up a compendium of the history and chronology of the ancient kingdom, which he has interspersed with philological notices, and which he must have translated into Greek. The public acts even of the Greek priests of the country were translated into the sacred characters, and the demotic was in daily use for law-deeds, private affairs, and accounts; duplicates being drawn up by the trapezitæ, or notaries, in the Greek language for the state and the Greeks, and the demotic writing for the Egyptians. The Greeks, for the purpose of acquiring the necessary knowledge of the language, at this time employed tutors. At the court, however, Greek

[1] Diogenes Laertius, Vita Democriti, 650, ed. Cas. Clemens Alex. Strom. i. 69.

literature and philosophy prevailed, and the conquered race continued to retain their hieroglyphical language only for hieratic purposes. No works of poetry, philosophy, or history of this period, written in hieroglyphs, have survived the wreck of ages: even the ritualistic formulæ show a notable decline in style and mode of writing. The people, abased and dejected by two foreign dynasties, had lost the powerful stimulus of their old religious notions, and tenaciously clung to their declining theosophy. Yet the importance of the study of the native language continued to advance: enlightened rulers prided themselves in speaking foreign tongues with fluency: the celebrated Mithridates discoursed in several, the ill-starred Cleopatra spoke seven, Egyptian among the number. As the stream of history becomes broader, our knowledge of what the ancients knew increases in proportion. At the time of Augustus one Chæremon, the keeper of the library of the Serapeum, had compiled a hieroglyphical dictionary, fragments of which, thanks to the industry of the Byzantine monk Tzetzes, have reached the present time. The historian Diodorus also treated, in his Ægyptiaca, on the hieroglyphs, and explained certain symbols: the traveller Strabo deigns to cast on them a passing allusion. In the historian of the empire, Tacitus, is the translation rendered by the priests to Germanicus of the monuments of Thebes with her hundred gates. Yet at Rome itself, so rare was the knowledge of hieroglyphs, that one of the emperors is said to have offered a reward for the interpretation of an obelisk.

It is to be regretted that the encyclopædia of Pliny contains no notice worth recording upon hieroglyphs. He disputes the rival claims of the Assyrians and Egyptians, upon the authority of Anticlides, to the honour of the invention of writing; but he does not treat on the nature of the hieroglyphs. Of course,

an occasional notice of their existence bursts from him, as from other writers, and he gives historical and artistical accounts of the marvellous monuments of the country, especially of the obelisks removed to Rome, but they are of little importance for the philology. After his time even less was known of the hieroglyphs; and the only writer who illumines the gloom of this literature in the declining ages of Rome is Horapollo, or Horus Apollo.[1] Two books of hieroglyphics of this writer remain, one of which contains the true explanation of several signs, the other is a collection of Roman emblemata rather than Egyptian hieroglyphs. Like the work of Chæremon, they enlarge upon the marvellous application of animal and other forms to express ideas, and enters into the etymological or esoteric meaning of certain ideographic signs. This age, that of Philip (A.D. 249), when the vanguard of Paganism, now on the decline, was led by the Neoplatonists, was favourable to the defence of the old esoteric notions of faith by rationalistic explanations; and the Hieroglyphics of this writer is rather a treatise of this kind than a practical commentary for the use of students. It is, however, not a little remarkable to find that so late in the days of the Empire as Gordian, his sepulchre had an inscription in Greek, Latin, Persian, and *Egyptian*.[2] But even in the age of Constantine their knowledge was by no means entirely lost. Ammianus Marcellinus, the historian of Julian, has introduced into his annals of the Apostate the Greek translation by Hermapion[3], of an obelisk removed by Constantius to Rome, one of the most valuable portions of [illegible] that has reached the present day. Julius Valens, an author of the third[4] century, has also given a brief epitome of

[1] Horapollo, Leemans, 8vo, Leide, 1836. [2] Capitolinus, Vit. Gordian.
[3] XVII. 4, p. 121—127, ed. Gronov.
[4] Mai. Class. Vet. 8vo. Romæ, 1835. vii. 99, 100.

the inscriptions of an obelisk erected by Sesostris to Serapis.

The hieroglyphs were of course particularly obnoxious to the Christian religion, at that time rapidly developing in Egypt; and the first care of the Church was to introduce a new alphabet of Greek characters, with some conventional forms, in order to destroy the old Pagan one, filled with the obnoxious idolatry of the old faith. To the early fathers the hieroglyphs presented no deeper interest than the Mexican picture-writing did to the zealous monks of Castile and Arragon, who crowded to the new world with Columbus and his fellow navigators. At the time of Clement of Alexandria (A.D. 211), they had passed into the condition of a dead language; and Clement describes how it was studied, by commencing with the demotic, or popular writing, and ending with the more difficult hieroglyphs.

"Those," says Clement, "who are being instructed, first of all learn that kind of Egyptian letters which is called epistolary; after that, the hieratic, which the sacred scribes use; and last of all, the hieroglyphic.

"The hieroglyphic is of two kinds: one, to express words (*cyriologic*), employs the first letters of the alphabet; the other is symbolical.

"The symbolical method is subdivided into several kinds: the first represents objects properly by imitation; the second in a tropical or figured manner; the third makes use entirely of allegories, expressed by certain enigmas. Thus, in this kind, if the Egyptians wish to write the sun, they draw a circle, of the moon, a crescent; in the tropical manner, changing and turning aside the sense of objects, by way of analogy, they express them, either in modifying their image, or in making them undergo different kinds of transformation. It is thus

that they employ anaglyphs when they would transmit the praises of kings by religious myths. This is an example of the third kind of writing, which employs enigmatical allusions. The Egyptians figure the other stars by serpents, on account of the obliquity of their course, but the sun is figured by a scarabæus."[1]

His division of the modes of writing is this:—

HIEROGLYPHICS.		METHOD OF WRITING.
ALPHABETIC.	MIMIC.	EPISTOLARY.
	TROPIC.	HIERATIC.
	ENIGMATIC.	HIEROGLYPHIC.

Porphyry,[2] in the next century (A.D. 304), divides the language nearly in the same manner into—

EPISTOLARY,	CŒNOLOGIC,
HIEROGLYPHIC,	ENIGMATIC,

but it is not very clear what he means.

The existence of a considerable number of works in the native language was not unknown to the Greeks, with whom they passed under the name of those of *Hermes*. Hence Clement[3] mentions two books of Hermes on music; one containing a series of hymns to the gods, the other the institutes of the life of the king: four others upon astronomy; one containing a list of the fixed stars, a second on the phenomena of the sun and moon. The two others were on the rising of the stars. Another contained a cosmography and geography, the course of the sun, moon, and the five planets, the chorography

[1] Boulianoff. Archéologie Égyptienne, 8vo, Leipsik, 1839, p. 300, 1re Tableau. There has been much discussion on the meaning of the Greek word Στοιχεῖα. See Encycl. Britann. 7e ed. 1842, XI. p. 298, note 2; but it seems to mean the name or sound of the letter, as A a, B e, C e, &c., in the alphabet.

[2] Vit. Pythag. c. 11, 12.

[3] Clemens Alex. Strom. vi. 4, p. 633.

of Egypt and scheme of the Nile, an account of the supplies of the temples and the lands apportioned to them, touching on measures and the requisites of sacred things. Another of the works referred to the sealing of victims and the instruction of youth; ten others to the honours to be rendered to the gods, and other actions of Egyptian piety, as sacrifices, first-fruits, vows, ceremonies, feasts, and similar things. Ten more books embraced the laws of the country and of the gods, and the instruction of the priests. Altogether, there were forty-two of these works—thirty-six embracing the philosophical notions of the Egyptians, and the other six medicine.

The titles of some of the Hermetic books were: "Physics, Origin, the Key, the Bowl;" "The Hidden Word;" "Concerning Universal Nature;" "To His own Mind;" "Address to the Tat, to Ammon, to Asclepios, the Asclepios;" [1] "The Damsel of the World," or "The Sacred Address of Isis to Horus," [2] and "The Reply of Horus to Isis;" [3] "The Letters of Æsculapius to the King Ammon;" a work called *Panaretos*, or "On all the Virtues;" [4] and another called "The Kyrannides." [5] According to Manetho, there were 36,525 Hermetic books, but this is now recognised as an astronomical number.[6]

The works of King *Suphis*, or the celebrated Cheops, who built the great Pyramid, were theological;[7] others of *Athothis* the King, the son of Menes,[8] who was a physician, treated

[1] Zoega, l. c. 515.
[2] Ibid. n. 39.
[3] Iamblichus, de Mysteriis. Cyril, lib. 1 and 2, contra Julian. Lactantius, Instit. divinar. lib. 1, 2, 4, 7. St. Augustin, de Civit. Dei, VIII.; Syncell. Chron.; Stobæus: Galen, vi. p. c. 1.
[4] Fabricius, Bibl. Græc. c. viii. 5, 6, p. 64.
[5] Zoega, l. c. 515.
[6] Syncellus, Chronogr. p. 51.
[7] Syncell. Chron. p. 56. ed. Goar.
[8] Syncell. l. c. 54.

upon anatomy; and a third of the royal authors, Nechepsus,[1] or Necho, who was the grandfather of Psammetichus, wrote on astrology, physic, and medicine.

There were others of the priests and scribes:[2] the prophet Bitys translated from the hieroglyphics in Sais a work addressed to Ammon on the ascension of the souls to God, probably part of the ritual.[3] Epeis, according to Philo-Byblius, had translated into Greek a work of a religious nature, in which he stated that the first divine nature was a serpent metamorphosed into the shape of a hawk, which created light by opening its eyes, and darkness by shutting them.[4] Petosiris, a priest of the age of Psammetichi, had also written treatises on the gods and mysteries,[5] and in conjunction with King Nechepsus, others on the sphere[6] and meteors,[7] on the cosmogony, astrology,[8] and the art of retaining health.[9] Another work, on nosology, was written by Iachen, who lived at the time of Senyes[10]—perhaps King Senefru.

The false Hermetic books[11] mention the secret hymns and the hymns taught by Isis to Horus.[12] Plato, better informed, speaks of the hymns of Isis,[13] which were apparently in the form of colloquies.[14] Certain books, which passed under the

[1] Galen, de Simplic. ix. 2, 19. Actius, Tetrab. i. 2. Fabric. iii. 20; i. v. 36, 47; iv. 3, 19. Pliny, N. H. ii. 23.

[2] The one which Zoega attributes to Ammon. See Justin Martyr, Cohort. ad Gentes, c. 38, is clearly an error. Cf. however, Fabric. Bib. Gr. I. c. 2, p. 2, p. 7.

[3] Iamblichus de Mysteriis, s. 8, c. 5.

[4] Philo Byblius apud Euseb. Præp. Evangel. I. c. 10, p. 41.

[5] Suidas, voce Πε ὅσιρις. [6] Plinius, N. H. ii. 23.

[7] Servius, ad Virg. Æneid. x. 272.

[8] Jul. Firmicus, Astron. iii. Præf.

[9] Zoega, l. c. 518. Cf. Juvenal, vi. 579. [10] Suidas, voce Ἰαχήν.

[11] Fabric. Bibl. Græc. I. c. 7, s. 5, tom. i. p. 58.

[12] Hermetica, ex edit. Patric. lib. xiii. f. 32. [13] Le . R. ii. 557.

[14] Fabric. Bibl. Græc. l. c.

name of those of Horus and Isis, are spoken of by Lucian.[1] There were also ancient lyrical poems, containing the praises of the gods and ancient heroes, and sung at ceremonies and entertainments.[2] and deaths, when threnes, or funeral dirges, composed in rhythm, were chanted for the deceased. Among the encomiastic odes is mentioned one in honour of Sesostris, which differed from the historical accounts. Hymns were also addressed to the rising and the setting sun,[3] and to Ammon, to obtain his oracular responses in the Oasis.[4] Of these the most important were the *Threne, i.e.*, the dirge or lament for Maneros,[5] another addressed to Saturn,[6] and a chant called the *Genethlia*, or Birth of Horus.[7]

The laws of the country were extant in eight volumes,[8] and its annals carefully preserved in several versions.[9] There were also works on astronomy,[10] on medicine,[11] on prognostica-

[1] In Gallo, s. 18, ii. 729.

[2] Plato, l. c. Diod. i. 53, 72; xvii. 50, 2.

[3] Porphyry, de Abstin. iv. s. 8; Plutarch, de Iside et Osiride, 466, 467, 468, 410; ii. 371, 363, 357; Herodot. ii. 79; Aristides, Eleusin. i. 257; Nonnus, S. Gr. Nazianzen, Orat. ii. 28; Eudocia, Violarium, p. 305.

[4] Curtius, iv. 7; Clemens Alex. Pædag. iii. 2, p. 252.

[5] Plutarch de Iside et Osiride, p. 363, D. 372, D. [6] Ibid.

[7] Gregor. Nazianzen, Orat. xxxix. p. 626.

[8] Diodorus, i. 75, 48; Ælian, Var. Hist. xiv. 34.

[9] Apollonides Horapios in the Coptic work Semenuthi. Theophilus, ad Autol. ii. c. 6. Damascius. Suidas, voce Ἡραΐσκος, mentions that Asclepius had read of a volume with annals of more than 30,000 years. Diodorus, i. 48, 75; Herodot. ii. 100. Plato, Timæus, p. 22, *et seq.* Theophrast. Lapid. 394. Strabo, vii. 461; i. c. 43, 44, 46, 70, 73, 95, 96; xvi. c. 51. Joseph. contra Apion. i. 6. Plutarch, de Iside et Osiride, 445 Aristides. Ægypt. p. 331. Lucian, de Sacrif. s. 14. Syncellus, Chron. 51. Tatian adv. Græc. c. 1.

[10] Diod. i. 81, 73; Herodot. ii. 4, 82; Strabo, xvii. 1160, 1171.

[11] Homer, Odys. iv. 219; Herodot. ii. 84, 77; iii. 129; Diodorus i. 82; Horapollo, i. 38. For the Moscho-graphia, cf. also Porphyry de Abstin. s. 87, p. 365, and Herodot. ii. 38.

tions of diseases, and on the selection of victims,[1] on magic,[2] and chemistry.[3] Letters, also, as literary compositions, were known.[4]

Some of these works existed at the time of the Romans, such as those mentioned by Apuleius[5] and Ammianus Marcellinus,[6] and Plutarch, containing the mysteries of Isis; another, described by Achilles Tatius,[7] in which was a description of the Phœnix, and those by Asclepeiades, already cited, besides the books ordered by Severus[8] to be shut up in the tomb of Alexander, those destroyed by Diocletian,[9] and books relating to the course and rise of the Nile.[10] Still, even to the days of Tzetzes (A.D. 1000), many works on hieroglyphics were known. After the fall of the Eastern empire all knowledge of them had disappeared.

After the revival of learning, the monuments of Egypt were published, unfortunately with little discrimination, by Kircher, and Bouchard,[11] La Chausse,[12] the author of the Nani Museum,[13] Caylus,[14] Gordon,[15] Winckelman,[16] Visconti,[17] and others, but so intermixed with spurious monuments, or disfigured in the copying, that it was almost impossible to arrive at a correct

[1] Hephæstion, Præfat. lib. i.; Ælian, apud Suidam voce Ἰαχήν.
[2] Ausonius, Epist. xix. 18; Lucian, De Sacrif. s. 14.
[3] Zoega, l. c. p. 525.
[4] Diod. i. 70, 95; Herodot. ii. 43.; Heliodor. Beth, iv. 8.
[5] Apul. Met. ii. 386; [6] Am. Marc. xxii. 14.
[7] Clitophon and Leucippe, iii. 86. [8] Dio. lxxv. c. 13; Suidas, Σεβῆρος.
[9] Johannes Antioch. p. 437; ii. 364. [10] Heliodorus, Æthiop. ii. 109.
[11] Monumens Égyptiens, fo. Rome, 1791.
[12] Museum Romanum, fo. Rome, 1690.
[13] Museum Veronense, fo. Rome, 1749; fo. Venezia, 1815.
[14] Recueil d'Antiquités, 4to, Paris, 1752-1767.
[15] Essay on Hieroglyphical Figures in the Coffin of the ancient Mummy belonging to Capt. W. Lethieullier, fo. London, 1737. Gordon is, I believe, an assumed name, the work being that of the antiquary Gough.
[16] Monumens Inedits. [17] Museo Pio Clementino, 1782.

opinion upon any inscription, upon the transcription of which, up to this time, the necessary care had not been expended.

Nor had the early travellers aided the philologist. The copies of Norden,[1] Paul Lucas,[2] and Pococke,[3] are useless for the purposes of study; and if those of Niebuhr[4] are entitled to praise, the same cannot be said of later travellers, for even the copies of Belzoni[5] are valueless to the study of the hieroglyphs. The publication of the description of Egypt[6] by the French scientific expedition under Napoleon, was the first sensible advance that had been made even in this essential particular.

At the commencement of the seventeenth century some attempt was made to decipher them by Valeriani,[7] and Pierius,[8] and Mercati[9]. Kircher[10] was the first who came forth with much pretension to success. His interpretations, of the most marvellous nature, suited to the taste of his age, were received with deference and credulity; and it is difficult to make out whether he was an enthusiast or charlatan—probably a mixture of both. He even wrote dedications in hieroglyphs, as well as in Latin, Greek, Syriac, Arabic, and Coptic. His theory seems to have been that the hieroglyphs were not used to express sounds, but ideas; yet in one part of his works he gives a hieroglyphic alphabet.[11] *Auto-*

[1] Drawings of Ruins at Thebes, 4to, London, 1741; Voyage d'Égypte, fo. Copenhagen, 1755.

[2] Voyage au Lévant, 12mo, Paris, 1603.

[3] A Description of the East, fo. London, 1743-5.

[4] Voyages en Arabie et en autres Pays, 4to, Amst. 1776-80.

[5] Narrative of Operations and Discoveries at the Pyramids &c. 4to, London, 1820.

[6] Fo. Paris, 1809.

[7] Hieroglyphica, fo. Lugd. Bat. 1529.

[8] Hieroglyphica, fo. 1556.

[9] Degli Obelischi di Roma, 4to, Roma, 1589.

[10] Œdipus Ægyptiacus, fo. Romæ, 1652-54.

[11] Obeliscus Pamphilius, fo. Romæ, 1650.

crator, the name and title of Domitian, on the Pamphilian obelisk, he thus translated: "The author of fruitfulness and of all vegetation is Osiris, whose productive force was produced in his kingdom out of heaven through the holy Mophta." Mophta, it appears, he made a genius of creation. The , branch and bee, which, according to Hermapion, meant "king," he translated "flyflap."

Vain, too, were the subsequent researches of Marsham,[1] Freret,[2] Warburton,[3] Jablonski,[4] Goguet,[5] the elder De Guignes,[6] D'Origny,[7] Schumacher,[8] Count de Gebelin.[9] Of these the most remarkable were the Memoirs of De Guignes, who, setting about the matter practically, ascertained by analysis the existence of groups with determinative characters, resembling the Chinese keys or radicals, and those of Köch,[10] Tychsen,[11] and last, but not least, of Zoega, whose work on obelisks[12] contains a compendium of ancient learning on the subject, and who, conscious of the errors of his predecessors, had arrived at two important conclusions, that the hieroglyphs were letters, and that the ovals contained royal names. The notion of

[1] Canon. Chron. 8vo, London, 1782.

[2] Réflexions sur les Principes généraux de l'Art de l'Écrire. Mémoires de l'Académie, vi. 609.

[3] Divine Legation of Moses, 1738, iv. 4; tom. ii. part i. p. 65.

[4] Pantheon Ægyptiorum, Prolog. s. 48, vol. iii. p. cxi. *et seq.*

[5] De l'Origine des Loix, part ii. lib. ii. c. 6.

[6] Mémoires de l'Académie, xxix. 1; xxiv. 1.

[7] L'Égypte Ancienne, 12mo, Paris, 1765, tom. ii. c. 7, 8, p. 23 *et seq.*

[8] Versuch die Geheimnisse der hieroglyphiscen Denkmäler aufzuklaren, 8vo, Lips. 1754.

[9] Le Monde Primitif, iii. 374.

[10] Tentamen, &c. Petropoli, 1788.

[11] Ueber die Buchstabenschrift der alten Aegypten in the Gottingische Bibliothek f. alte Liter. und Kunst, 1789, st. 6.

[12] De Origine Obeliscorum, fo Rome, 1797.

Kircher, that the hieroglyphs were only employed for a sacred or mystical language, used by the priests to express in cabalistic terms the notions of their religion, had already been exploded by Warburton, who had demonstrated, from the testimony of profane authors, that they were really and truly the language of the country, "employed to record openly and plainly their laws, policies, public morals, history, and, in a word, all kinds of civil matters."[1] Here, however, the matter rested.

The French expedition to Egypt opened the sealed book. In 1799 M. Boussard[2] discovered, near Rosetta, a large stone of black granite, commonly known as the Rosetta stone or inscription. This appears, from late researches of Mr. Harris, to have originally been placed in a temple of Tum, or Tomos, the setting sun, erected to that god by the Pharaoh Necho. It was originally presented to the French Institute of Cairo, but subsequently, at the capitulation of Alexandria, it was surrendered to General Hutchinson, and presented by King George III. to the British Museum. It contained a trigrammatical inscription; one in hieroglyphs, a second in the demotic, or vernacular, a third in Greek. From this last it appeared that it was a solemn decree of the united priesthood in synod at Memphis, in honour of Ptolemy V., who had conferred upon them certain benefits, in gratitude for which they had ordered it to be erected in every temple of the first, second, and third rank throughout the country in the three forms of writing. About half of the hieroglyphical part had been destroyed; but enough remained for decipherment. Here then was what Archimedes demanded, a point on which to stand, a certainty

[1] Divine Legation of Moses, l. c. See also the attack of Prof. Wall, An Examination of the Orthography of the Jews, 8vo, London, 1835.

[2] Arago, Éloge Historique du Dr. T. Young, 8vo, Paris, 1832.

to commence with. The French savans had made drawings, and disseminated a knowledge of its existence, and with France the first attempt at decipherment began. The demotic, or enchorial characters, a very cursive form of writing, appeared the most promising, especially as the idea prevailed that it was alphabetic in its nature. This idea, as all hitherto entertained on the nature of the inscriptions, was erroneous. Silvestre de Sacy, one of that illustrious Oriental school which France produced in the last half century, essayed this portion of the inscriptions, and pointed out, in the demotic, some of the proper names mentioned in the Greek version. In 1802.[1] Akerblad,[2] a Swedish archæologist, who united classical and Oriental attainments, advancing a step further, had assigned the value of the characters employed to transcribe the proper names.

Here the French researches dropped; no one attempted the hieroglyphical inscription. Some notions, vague and expressed in general terms, that the hieroglyphs might be phonetic, had, as already stated, been set forth by Zoega and De Guignes; but they were mere conjectures.

The mode of deciphering the demotic was as follows:—

First, it was perceived that the words Alexander and Alexandria, in the fourth and seventeenth lines of the Greek inscriptions corresponded with two other groups in the second and tenth line of the demotic inscription. A group of characters which occurred in almost every line was supposed to be the word "and." A group of characters, repeated twenty-nine or thirty times in the enchorial inscription, could only correspond to the word "king" in the Greek, which, with its

[1] Lettre au Citoyen Chaptal, 8vo, 1802.

[2] Lettre sur l'Inscription Égyptienne du Monument de Rosette, 8vo, Paris, 1802.

compounds, is repeated about thirty-seven times. Another group of characters, recurring fourteen times in the enchorial, corresponded to the word Ptolemy, which occurs eleven times in the Greek, and generally in passages in the same relative position.[1]

The important knowledge gained in this branch prepared the way for the advance to be made in the hieroglyphic, concerning which the most extraordinary ideas continued still to infest the learned of Europe. The Chevalier Palin,[2] in 1802-4, did not hesitate to assert that it was only necessary to translate the Psalms of David into Chinese, and write them in the ancient characters of that language, in order to reproduce the Egyptian papyri, and that these contained many Biblical books. In 1806, M. Von Hammer had given to the world the translation of the work of some Arabic charlatan,[3] which professed to explain the hieroglyphs. Lenoir, in 1810,[4] considered them to be Hebrew documents. An anonymous author, in 1812,[5] thought that the inscription of the Portico of Dendera contained a translation into hieroglyphs of the 100th Psalm.

In 1816, Bailey, a Cambridge prize-essayist, only repeated what Zoega had said in 1799.[6] In 1821 appeared a translation at Genoa of the Pamphilian obelisk, in which it was said to contain an account of the victories of the pious over the wicked, B.C. 4000 (!) in the reign of the sixth and seventh

[1] See Young in the Encyclopædia Britannica, 4to, London, 1828. Hieroglyphics.

[2] Lettres sur les Hiéroglyphes, 8vo, 1802; Essai sur les Hiéroglyphes, 8vo, 1804; Analyse de l'Inscription en Hiéroglyphes du Monument trouvé à Rosette, 8vo, Paris, 1804.

[3] Ancient Alphabets, by Ahmed Bin Abuker Bin Wahshih, 4to, London, 1806. Magaz. Encycl. 1810, p. 145.

[4] Nouvelle Explication des Hiéroglyphes Égyptiens, 8vo, Paris, 1809-16.

[5] Étude des Hiéroglyphes, 8vo, Paris, 1812.

[6] Hieroglyphorum Origo et Natura, 8vo, Cantab. 1816.

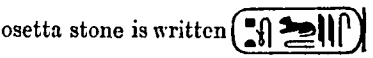
kings of Egypt. Lacour, a French savant, in 1821, thought that they contained Biblical phrases.[1] The same year, so prolific in works on hieroglyphics, saw also the work of Senkler,[2] who had advanced to the idea that the hieroglyphs represented metaphorically the ideas of the sounds of the objects which they represented, like what is called a rebus—a very near approach to the truth; but the translations of Senkler, full of philosophical and mythological ideas in very verbose style, are false.[3] Amidst this mass of error and contradiction, the application of the phonetic principle by Young, in 1818, had all the merit of an original discovery. Professor Vater had suggested to him that the unknown language of the Rosetta stone was capable of being resolved into an alphabet of thirty letters. His attention was, however, aroused, in 1814, by some papyri brought to England by Sir W. R. Boughton; and he communicated some anonymous observations on the enchorial writing, to the Society of Antiquaries[4] in the summer of that year, which, however, did not appear in print till 1817, and were followed by others in 1818. His mode of analysis was peculiarly clumsy, considering that means so available were at hand. The method of his investigation was rather mechanical than scientific. Having ascertained within certain bounds the relative positions of the enchorial groups, or words, he tried to determine in the same manner the hieroglyphical; but this was by no means so easy, as he discovered that the versions were paraphrases, not literal translations; and it was

[1] Essai sur les Hiéroglyphes, 8vo, Bourdeaux, 1821.

[2] Auflosung und Erklarungsversuch der zehn hieroglyphischen Gemaelde auf einem Aegyptien Mumienkasten in dem Kaiserl. Königlich Antiken-Cabinet zu Wien, in the Isis Journal, 1821.

[3] Allgemeine Encyclopaedie der Wissenschaften und Kunst, 4to, Lips. 1826, ii. sect. 13, Theil, s. 183, u. f. Hieroglyphen.

[4] Archæologia, 1817, xvii. 60.

only by a comparison of the three kinds of writing that he traced the name of Ptolemy up in his own way, from the demotic into hieratic, into hieroglyphs. His translations, however, are below criticism, being as unfounded as those of Kircher. How far even, in the decipherment, he proceeded correctly may be doubted; but by this means he arrived at the, to him at least, important fact, that the first hieroglyph in Ptolemy was the equivalent of the demotic or vernacular form, and so on with the rest.[1] As the one was assumed to be phonetic, the others must be so too. The name of Ptolemy on the Rosetta stone is written  and Young did not succeed in assigning to all the hieroglyphs their true value. The third character he strangely supposed superfluous; and the lion he read OLE. He selected also from the inscriptions of the description of Egypt the name of Berenice without the aid of any trilingual monument, and attempted its analysis by giving what he supposed the phonetic value of each hieroglyph. Here, also, he failed in detail. Altogether he made out the value of five characters, but was unable to analyse by his results more than these[2] two names. All his other attempts were utterly unsuccessful; for he mistook *Autocrator* for *Arsinoe*, and *Cæsar* for *Euergetes*. On the whole, he had some success with the *interpretation* of certain groups, which he published in his vocabulary; but even here there is much too incorrect in principle to be of real use: much of it is beneath criticism. In this branch Young had adopted an inductive mode of research. Following up the whole labours of Young, neither his subsequent essay, nor the analysis of the Rosetta inscription, nor the protocols of demotic

[1] See Young (Thos.), Account of Discoveries in Hieroglyphical Literature, 8vo, London, 1823.

[2] Encyclopædia Britannica, 4th ed. iv. 1st Part.

papyri, nor his vocabulary of this branch, can be held to justify the promise of his first attempts. He clung to a vicious hypothesis with a fanatical pertinacity.

After the essay by Young, in 1818, Champollion le Jeune, a young French savant, entered upon the path of the discovery so feebly made by Young. He had preceded Young in his publication of "Egypt under the Pharaohs," in 1814.[1] It was the first move in the true direction. Jablonski and Zoëga had done all that could be effected, as far as collecting the information of the classical writers was concerned. Zoega, indeed, had even advanced to the point that some hieroglyphs must be employed as sounds. How far Young had gone, has been already stated. From his earliest youth Champollion had been attracted to the study, had stored his mind with much knowledge of Coptic, and of the opinions of the ancients; and, after coming from the Lyceum, or public school, had studied the hieroglyphic inscriptions, and obtained considerable insight into their structure and nature. Up to the year 1821,[2] he was unconscious of the phonetic value of the hieroglyphs; he had even not availed himself of the discoveries of Young. It was in January, 1822, that Mr. Bankes, who had before forwarded to Letronne the copy of a Greek inscription on the base of a small obelisk at Philæ, transmitted a copy of the hieroglyphical inscription of the shaft. Letronne had already conjectured that this text must contain the same matter as the Greek; and Champollion then published his letter to M. Dacier, in September, 1822.[3] In the subsequent year he had commenced

[1] L'Égypte sous les Pharaons, 8vo, Paris, 1814.

[2] Klaproth, Examen Critique des Travaux de feu M. Champollion, 8vo, Paris, 1832; Champollion, De l'Écriture Hiératique, fo. Grenoble, 1821.

[3] Lettre à M. Dacier relative à l'Alphabet des Hiéroglyphes Égyptiens, 8vo, Pari, 1822.

his "Egyptian Pantheon,"[1] a splendid work accompanied by coloured plates, and explanations from the monuments, which continued till 1825. During the year 1824 he had visited the splendid collection of Drovetti, now in the Museum of Turin, and published his "Letters to M. Blacas,"[2] entering first upon the discussion of the older part of the history and monarchy, and had explained more fully his system and mode of induction in his "Compendium of the Hieroglyphical System of the Ancient Egyptians."[3] In 1826 he had published a second "Letter to the Duc de Blacas,"[4] containing a series of observations on royal names; and in 1827, a small, but, for the time, valuable, catalogue of the Museum of the Louvre.[5] In 1831 was issued a prospectus of the "Monuments of Egypt and Nubia."[6] In 1833 came forth his letters written from that country, full of curious and valuable information.[7] The publication of the "Monuments of Egypt," commenced by him, were published afterwards by his brother, M. Champollion-Figeac,[8] as were his Grammaire, in 1836-41;[9] and his Dictionnaire, in 1841.[10]

Champollion so far improved at once upon the hypothesis of Young, that he conjectured the hieroglyphs to be used in these cartouches alphabetically, and not syllabically; and

[1] Panthéon Égyptien, 4to, Paris, 1823-25.

[2] Lettres à M. le Duc de Blacas, 8vo, Paris, 1824.

[3] Précis du Système Hiéroglyphique, 8vo, Paris, 1824.

[4] Lettres à M. le Duc de Blacas, 8vo, Tur. 1826.

[5] Notice descriptive des Monumens Égyptiens du Musée Charles X. 12mo, Paris, 1827.

[6] Prospectus. Les Monumens, &c. 8vo, 1831.

[7] Lettres Écrites d'Égypte et de Nubie, 1828-9, 8vo, Paris, 1833.

[8] Monumens de l'Égypte, fo. Paris, 1835.

[9] Grammaire Égyptienne, fo. 1836-41.

[10] Dictionnaire Égyptien, fo. Paris, 1841.

aided by the lithograph of Bankes's obelisk of Philæ, which contained the name of Cleopatra, instituted the following comparison:—

First, he supposed that in the texts each hieroglyph had the value of the initial syllable of the object which it represented. Now, 1 being Cleopatra, and 2 Ptolemy, he thus proceeded—supposing both to be written in phonetic hieroglyphs:—

1. The first sign in the name of Cleopatra, which is a *knee*, in Coptic *kne* or *keli*, ought to be the *K* of Kleopatra, and would not occur in Ptolemy, which was the fact.

2. The second hieroglyph, a lion couchant, in Egyptian *labu* (*laboi* Coptic), occurs in the second place of the name of Cleopatra—in the fourth place of that of Ptolemy; therefore L.

3. The third hieroglyph, a reed, *aak* in Egyptian, *akê* in Coptic, occurred in the sixth and seventh place of Ptolemy—when doubled representing the diphthong AI or AIO, and the A or E of *Cle*opatra.

4. The fourth hieroglyph, a kind of noose, which must represent the O in Kleopatra, occurred in the third place—that of the O in the name of Ptolemy.

5. The fifth sign, a mat, which represented the P in Cleopatra, occurred in the first place—that of P in Ptolemy.

6. The sixth sign, an eagle, the Coptic word for which is *Akhoom*, occurring in the place of the A of Cleopatra, was not found in the name of Ptolemy; but it occurred in the ninth place of the name of Kleopatra, exactly where the A recurs in Greek.

7. The hand, in Coptic *toot*, was evidently the T of Cleopatra

in the seventh place, but did not, as might have been expected, appear in the second of Ptolemy.

Long researches had, however, convinced the inquirer of the existence of homophones, or characters having the same value, interchanged in proper names with one another. The second place of Ptolemy was occupied by a hieroglyph, often repeated at the end of female proper names, and apparently the T, or feminine Coptic article.

8. The eighth place in Cleopatra was occupied by a mouth, in Coptic *ro*, and was consequently the R . It did not occur in Ptolemy, in which there is no R.

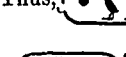
9. The eagle was the sixth sign, and recurred twice in its right place in Cleopatra.

10. The semicircle was the second of Ptolemy, and in conjunction with

11. The egg, was found at the end of female proper names, and did not appear essential to the sound.

In the name of Ptolemy there are, consequently, the fifth, *m*, and last sign, *s*, only to explain. All the others had been found in their proper order.

By comparing the two names with that of Alexander, he obtained the probable value in sound of fifteen phonetic hieroglyphs; and it soon became evident that, by examining other names of the Persian, Greek, and Roman rulers of the country, the greater part of the phonetic hieroglyphs in use from the time of Cambyses till the middle period of the Roman Empire could be developed. Hence Champollion, with remarkable tact, discovered this Persian name, and those as well as the titles of the Roman emperors, which turned out to be in the Greek language—that in which they are placed on the currency: as Autocrator for Imperator or Emperor, Kaisar for Cæsar, and Sebastos for Augustus. This alone was an immense

stride; but it soon became evident that it was capable of still further extension. A cursory glance on the Rosetta stone shows that the mass of hieroglyphs of which the inscription is composed are the same as those used in the names of the foreign rulers of Egypt, arranged in different order in groups. For example; in the cartouche or ring, which encloses the name of Ptolemy is a group , the two first hieroglyphs of which are those of Ptolemy; viz., P T. Now in the Greek version it states that Ptolemy is beloved by PHTHA—in Coptic PTAH; consequently the third or last hieroglyph was an H. By applying this principle to the various hieroglyphic groups in texts, a number of Coptic words were discovered, besides the names of deities, persons, and places of ancient Egypt. And extending it to the cartouches of the older kings, it soon appeared that phonetic hieroglyphs were not, as Young, and even Champollion himself, had at first supposed, an innovation adopted under the foreign rulers, but a continuance of the old system. Thus, *Khuvu* (*Cheops*), and *Psemetik* (*Psammetichus*),  were only part of the same system of writing. These hieroglyphs, indeed, were mixed up with many, ideographical or symbolic; but the development of the important fact in the decipherment gradually revealed the whole grammar and system of the language, and placed the future inquirer on the route for the decipherment and interpretation of the whole. By these means the great problem was worked out in all its essentials in eight years by the indefatigable and wonderful genius of Champollion; and during his lifetime no one can be

said to have aided or competed with him in the task. He more feared, it appears, rivals of his glory than detractors of his fame; but the Orientalists of his day for the most part beheld his labours with suspicion or indifference, if they did not attack them with asperity. The general public, however, received them with wonder and delight; and the French government, ever alive to the interests of learning, sent him at the head of a scientific mission to Egypt, to rescue the rapidly vanishing monuments of the country from oblivion, by copying them, and to illumine the world by explaining them. Provided with a simple and efficacious system, and the experience of an examination of a great number of texts, Champollion translated with a marvellous facility the inscriptions submitted to him. He at once saw the purport of the hieratic manuscript of M. Sallier at Aix, containing the campaign of Rameses against the Sheta. He read with fluency the different inscriptions on the monuments, and gave life to their mute forms. His most remarkable reading was the name of Judah Malcha (the Kingdom of Judah), on the wall of Karnak, amidst the prisoners of Sheshak. His "Lettres Ecrites" are full of new translations, illustrative of the mythology, history, ethnography, manners and customs of the Egyptians as they were, and declare themselves. His great philological work, his Grammar, which he called his visiting-card to posterity, was not finished till his return, nor published till after his death.

If the process of Young inspired confidence, although it led to error, by the mathematical precision with which it was conducted, that of Champollion, more literary, more perfect in its application and astounding in its results, found a host of opponents on the one hand, and supporters on the other. Salt, the British Consul-General of Egypt, known for his travels, excavations, and collections, had embraced the new theories, and

published a little essay in 1825;[1] and Guigniaut,[2] in France, followed Champollion, in the same year, neither, however, with much philological talent. New theories were, however, immediately brought into collision with that of Champollion, of which the most remarkable and perseveringly followed has been that of Spohn: that the language was a sacred dialect, and that the hieroglyphs were not letters, but the symbols of letters,[3] which found a zealous disciple and expounder in Seyffarth.[4] He divided them into *emphonic*, *symphonic*, and *aphonic*. So far as it is possible to understand what he means, it would appear that *emphonics* are phonetic; *symphonic*, enclitic, or supplementary sounds; *aphonics*, ideographics. In the same year Coquerel[5] had applied the new discoveries to Biblical researches; and Goulianoff, a Russian savant, had proposed a modification of the system, in which he styled the phonetical hieroglyph *acrologic*,[6] which was followed by a letter of Klaproth.[7] Cardinal Wiseman, in the succeeding year, had, like Coquerel, applied them to Biblical studies.[8] In Egypt itself Colonel Felix had made researches on the royal names;[9] and Sir Gardner Wilkinson had, in the same year, published a work at Malta, which not only treated upon all kind of matters connected with the new studies, but also enlarged the vocabu-

[1] Essay on Dr. Young and M. Champollion's Phonetic System of Hieroglyphics, 8vo. London, 1825.

[2] Description d'une Caisse de Momie Égyptienne, 8vo. Paris, 1825.

[3] De Lingua et Litteratura Veteris Ægypti, 4to. 1825. This idea is said to have emanated from Cosmos Indicopleustes (Cosmographia, 161), in the sixth century.

[4] Rudimenta Hieroglyphices, 4to. Lipsiæ, 1825; Brevis Defensio Hieroglyphices inventæ a Spohn et Seyffarth. 4to. Lipsiæ, 1827.

[5] Biographie Sacrée, 8vo. Amst. 1825-6.

[6] Essai sur les Hiéroglyphes, 4to. Paris, 1827.

[7] Seconde Lettre sur les Hiéroglyphes, 8vo. Paris, 1827.

[8] Horæ Syriacæ, 8vo. London, 1828. [9] Notes, 4to. Pisa, 1828.

laty;[1] in which year Mr. Osburn,[2] also a Coptic scholar, had thrown considerable light upon many points. The work of Greppo,[3] in the same year, although it added nothing to the study, yet gave a lucid account of the discovery. During this time the European residents in Egypt had shown considerable activity; and some of the most remarkable inscriptions had been copied and published by Sir G. Wilkinson, Mr. Haliburton,[4] and Mr. Bonomi.

Immediately on the return of the French expedition, in 1829, Klaproth[5] renewed his attack upon Champollion, who had pointed out in a masterly manner his daring errors in Coptic. In the next year Janelli,[6] a Neapolitan writer, published an account of the Rosetta stone on the old ideographic theory. In 1832 appeared the first fruits of the second expedition to Egypt, in the publication of "The Monuments of Egypt," by Rosellini,[7] who had accompanied the expedition from Tuscany, having been joined to it at the request of the Grand Duke, and to whom the publication of "The Historical Monuments" was confided. The Italian Egyptologist, although by no means endowed with the talents or knowledge of Champollion, yet, by his perseverance, and the solidity of his judgment, must be

[1] Materia Hieroglyphica, 4to. Malta, 1828.

[2] Osburn (W.), An Account of an Egyptian Mummy, presented to the Museum at Leeds, 8vo. Leeds, 1828.

[3] Essai sur le Système Hiéroglyphique, 8vo. Paris, 1829, translated by M. Stuart, 12mo. Boston, 1830.

[4] J. (Hali)Burton, Excerpta Hieroglyphica, long fo. Cairo, 1826-9.

[5] Collection des Antiquités recueillées par M. le Chevalier Palin, fo. Paris, 1829.

[6] Fundamenta Hermeneutica Hieroglyphicæ cryptica veterum Gentium, 8vo. Neapol. 1830; Hieroglyphica Ægyptia, 8vo. Neapol. 1830; Tentamen Hermeneuticum, 8vo. Neapol. 1831. See Cullimore in Trans. Roy. Soc. Lit. 1839, ii. 75.

[7] Monumenti d'Egitto e della Nubia, 8vo. with plates, fo. Pisa, 1832.

allowed to have materially aided the rising study of the hieroglyphs. The virulence of Klaproth[1] had, however, by no means ceased. Wrong in principle, although right in some minor details, he still continued to attack even the memory of Champollion, now deceased, with his criticisms.[2] In the mean time the Italian savans, through ignorance and perverseness, still clung to the departed system of Kircher and Gebelin.[3] Mr. Williams had also disserted on the same principle.[3] Salvolini, a Sardinian, sent by his government to complete his researches at Paris, attracted by the new study, devoted himself to Champollion, and appeared as a successor to his system, publishing, in 1832-3, a "Memoir on the Notation of Dates,"[4] in 1835 an account of the papyrus of M. Sallier at Aix, one of the poems recording the campaign of Rameses II. against the Sheta,[5] in 1836 an analysis of the hieroglyphic text of the Rosetta inscription,[6] and in 1837 an account of the inscription of the obelisk of Luxor, removed to Paris.[7] This was the first attempt at critical analysis after the labours of Champollion. He endeavoured to enlarge the alphabet, to prove the value of sounds and the meaning of groups by an extended examination of texts; and although there can be no doubt but that his discoveries were extensively pirated from his illustrious master, and his method of analysis was unsound in principle, yet

[1] Examen Critique, &c. 8vo. Paris, 1832.

[2] Fr. Ricardi fu Carlo. Compimento e Traduzione della Parte Greca e Geroglifica della Pietra di Rosetta, 8vo. Genova, 1833. De Gebelin wrote in the Recueil d'Antiquités of La Sauvagère.

[3] Essay on the Hieroglyphics, 8vo. London, 1836.

[4] Des Principales Expressions qui servent à la Notation des Dates, 8vo. Paris, 1832; Seconde Lettre, 8vo. Paris, 1833.

[5] Campagne de Rhamses le Grand contre les Scheta, 8vo. Paris, 1835.

[6] Analyse Grammaticale, 4to. Paris, 1836.

[7] Traduction et Analyse des Inscriptions sur l'Obélisque de Luxor, 4to. Paris, 1837.

considerable merit is due to him for the method he followed. In 1835 Dr. Leemans, of Holland, had published a valuable edition of Horapollo, connecting this author with the new discoveries.[1] Sebastiani, in Italy, had also applied it to Biblical chronology.[2] The study of philology had, however, continued to be cultivated in England; for Sir Gardner Wilkinson, in 1835, had published his "Topography of Thebes,"[3] and in 1837 his "Manners and Customs;"[4] and Yorke,[5] Colonel Leake, the Bishop of Gibraltar,[6] and Mr. Pettigrew,[7] all adopted the truth of the theory of Champollion;[8] while Biblical analogies were admitted by many, as Cooke Taylor[9] and Robiano.[10]

In the mean time a new student appeared in the ranks, who, after already distinguishing himself by researches into the relation of the Coptic, applied his mind to the systematising of the labours of Champollion.[11] This was M. Lepsius,[12] who in the Annali of the Institute of Archæological Correspondence at Rome, founded by the Germans and English, and protected by

[1] Horapollinis Niloi Hieroglyphica, a Leemans, 8vo. Amst. 1835.

[2] I Faraoni di Abramo, &c. 8vo. Roma, 1835.

[3] Topography of Thebes, 8vo. London, 1835.

[4] Manners and Customs of the Ancient Egyptians, First Series, 8vo. London, 1837; Second Series, 8vo. London, 1841.

[5] Trans. Roy. Soc. Lit. 4to. 1827, i. 205 *et seq.*

[6] Ibid. 1834, ii. 457, on Royal Names on Sarcophagus in the British Museum.

[7] History of Mummies, 4to. London, 1834.

[8] Champollion-Figeac. [Notice sur les MSS. Autographes de Champollion le Jeune, 8vo. Paris, 1842.

[9] Illustration of the Bible from the Monuments of Egypt, 8vo. London, 1838.

[10] Histoire de l'Église, 8vo. Paris, 1836.

[11] See Gliddon, Lecture, p. 7.

[12] Annali ix. 1—100, separately reprinted as Lettre à M. Rosellini, 8vo. Rome, 1837.

the munificence of the present King of Prussia, published a letter to M. Rosellini, in which he critically analysed and arranged the structure of the language. It was the first step in the right direction since the death of Champollion. The study, indeed, had already found a great ally in the support given to it by the Chevalier Bunsen, who, struck by the talent of the young German student, warmly seconded his efforts.[1] Colonel Mure had also entered upon ethnological researches connected with Egyptian history about the same time.[2] In 1839[3] M. Lepsius visited England, and at a meeting for the purpose, in the rooms of the Royal Society of Literature, the Chevalier Bunsen and M. Lepsius had explained many points of chronological and philological interest. The study continued steadily to advance by the labours of Dr. Leemans[4] in Holland, and of M. Lenormant,[5] Nestor L'Hôte,[6] M. Prisse,[7] and M. Pauthier,[8] in Paris. In Great Britain continued researches

[1] For other dissertations see Bulletin, p. 1 *et seq.* 1838, p. 37, sur les deux Statues Colossales Égyptiennes au Musée Royal de Berlin; Annali, 1838, ix. p. 167; Notice sur deux Statues Égyptiennes, 1838, x. 103-22; Analyse des Inscriptions Hiéroglyphiques.

[2] I Popoli Stranieri, 8vo. Rome, 1837; Annali, 1836, in p. 333.

[3] See Literary Gazette, May, 1839. Nos. 1164, 1165.

[4] Lettre à M. François Salvolini, 8vo. Leide, 1838; Monumens Égyptiens, fo. Leide, 1839, Lettre à M. de Witte, Rev. Arch. 1847-8, p. 528—717; à M. Prisse d'Avesnes, Rev. Arch. 1849.

[5] Musée des Antiquités Égyptiennes, fo. Paris, 1841; Éclaircissement sur le Cercueil de Mycerinus, 4to. Paris, 1839; Recherches sur les Hiéroglyphes d'Horapollo, 8vo. Paris, 1838.

[6] Notice Historique sur les Obélisques, 8vo. Paris, 1836; Lettre à M. de Witte, Lettres Écrites de l'Égypte en 1838-9, 8vo. Paris, 1840.

[7] Notice sur la Salle des Ancêtres de Thouthmes III. Rev. Arch. ii. 1, 8vo. 1845; Antiquités Égyptiennes de Caire, Rev. Arch. ii. 729: Recherches sur les Légendes Royales de Schai, ib. 457; Antiquités Égyptiennes du Musée Britannique, 1846, iii. 693; Monumens Égyptiens, gr. fo. Paris, 1847; Fac-simile d'un Papyrus, fo. Paris, 1847.

[8] Sinico-Egyptiaca, 8vo. Paris, 1842.

were carried on by Mr. Birch,[1] Dr. Hincks,[2] Dr. Nolan,[3] Mr. Osburn,[4] Mr. Pettigrew,[5] Spineto,[6] and the Bishop of Gibraltar.[7] In Italy the Abbé Gazzera,[8] Professor Migliarini,[9] the Chevalier Quintino,[10] Ungarelli,[11] and Lanci,[12] entered with ardour on the new path. In Germany the important researches of the Chevalier Bunsen;[13] while in America the interesting

[1] Vyse, Pyramids of Gizeh, 8vo. London, 1841-2; Description of an Egyptian Tomb, Arch. 1841, xix. 111-26; Tablet of Rameses II. ib. xxxiv. 357; Annals of Thothmes III. ib. xxxv. 116; Lettre à M. Letronne, Rev. Arch. v. 301. Sur le Nom Calasiris, 195; La Famille de Psammétichus, 623. Hieratical Canon at Turin, Trans. Roy. Soc. Lit. i. 203. Obelisk of the Atmeidan, ib. ii. 218; Statistical Tablet of Karnak, ib. 317; Ivory Ornaments at Nimroud, iii. 151; Chæremon, ib. 385; Gallery of Antiquities, 4to. 1846: On the Egyptian Mummy, Arch. Journ. 1850, p. 273; Object of Reign of Amenophis III. ib. 1851, p. 396; Egyptian Calendar, ib. 1850, p. 11.

[2] On the Egyptian Stele or Tablet, Trans. Roy. Ir. Acad. xix. Part ii. 4to. Dublin, 1849; ib. xxi. Part i. 1846; On the Defacement of Divine and Royal Names, ib. xxi. Part ii. 1848; An Attempt to Ascertain the Number, Names, and Powers of the Letters of the Eleroglyphic Alphabet, 1; Catalogue of the Egyptian MSS. in the Library of Trinity College, Dublin, 8vo. Dublin, 1843; Brit. Arch. Assoc. Winchester Meeting, 8vo. 1845, 246; Dub. Univ. Mag. 187, 1846.

[3] Dr. Nolan on the Cycles of the Ancient Egyptians, Trans. Roy. Soc. Lit. 4to. London, 1840, iii. 289; The Egyptian Chronology Analysed, 8vo. London, 1848.

[4] Osburn (W.), The Antiquities of Egypt, 8vo. London, 1841; Ancient Egypt, 8vo. 1846; Monumental History of Egypt, 8vo. 1855.

[5] Examination of the Mummy of Petmautiohmes, Arch. xxvii. 262-73.

[6] The Elements of Hieroglyphics and of Egyptian Antiquities, 8vo. London, 1845.

[7] On a Royal Egyptian Coffin in the British Museum; Trans. Roy. Soc. Lit. II. 457, III. 238; On the Astronomical Ceiling of the Memnonium, III. 484; Flaminian Obelisk, ib. 8vo. New Series, i. 176.

[8] Memor. della R. Accad. di Torino, 4to. 1835; Monumenti Geroglifici del Regio Museo Egizio, 4to. Torin, 1824.

[9] Annali, 1842.

[10] Lezioni Archeologichi, 4to. Torino.

[11] Interpretatio Obeliscorum, fo. Romæ, 1842.

[12] Lettre sur l'Interprétation des Hiéroglyphes Égyptiens, 8vo. Paris, 1847.

[13] Aegyptens Stelle in der Weltgeschichte, 8vo. Hamburg, 1845; Egypt's Place in Universal History, 8vo. London, 1848, translated by C. H. Cottrell, Esq. M.A.; also Report of Brit. Assoc. for Advancement of Science, 254, 8vo. London, 1848.

lectures of Mr. Gliddon[1] rapidly and extensively diffused a knowledge of the subject. Important accessions have been made lately to the ranks of the *hierologists*, or those who profess to interpret the hieroglyphs, in MM. de Rougé[2] and De Saulcy,[3] Ampère,[4] Mariette,[5] Chabas,[6] Lenormant, fils[7], Lesueur,[8] Brunet de Presle.[9] In Germany M. Brugsch[10] has

[1] In the Journal, The New World, New York, 1844, which have been continued since in various American Journals; see also the Ethnological Journal, 8vo. London, 1848, 241 *et seq.*; Otia Ægyptiaca, 8vo. London, 1849.

[2] Sur les Lions de Granit rouge de Nubie, Rev. Arch. 1847, iv. 115; Sur le Sesostris de la Douzième Dynastie, ib. 478, 731; Sur un Interprétation d'un Nom Egyptien, Rev. Arch. 1848, v. 303; Sur les Travaux de Champollion, ib. 321; Inscriptions des Rochers de Semne, ib. 311; Examen de l'Ouvrage de M. Lepsius, Rev. Arch. 1849, vi. 523, 650; Sur un Stele Égyptienne, ib. 558; Sur la Statue Naophore du Vatican, Rev. Arch. 1850, viii. 37; Sur le Papyrus de Turin, ib. 559; Rapport à M. le Directeur Général des Musées nationaux, *Moniteur*, 1851; Annales de Philosophie Chrétienne, xiv. xv. xvi.; Manuscrit Egyptien, ix. 385; Phénomènes Célestes, ib. 653; Athenæum Français, 1854-5-6; L'Inscription du Tombeau d'Aahmes, 4to, Paris, 1851; Essai sur une Stele, lithograph, 4to, Berl., 1849.

[3] Défense de M. Champollion, Rev. Arch. i. 341; Lettre à M. Letronne sur les Proscynemes, ib. 735; Sur l'Écriture Démotique, Rev. Arch. 1845, ii. 393; Examen des Ecrits de Klaproth, Rev. Arch. 1846, iii. 1.; Sur un Fragment d'Ecriture Démotique, ib. 1848, v. 104.

[4] Des Castes, Rev. Arch. 1849, v. 405.

[5] Notice sur un Fragment de Papyrus du Musée Royal de Turin, Rev. Arch. 1849, v. 305; Renseignements sur les 62 Apis Alten Franc. 1850; Bull. Arch. pp. 86, 90, 92, 100.

[6] Is known to the author by several communications in MS.

[7] Fragments du Livre de Chærémon, Rev. Arch. 1850, viii. 13.

[8] Chronologie des Rois d'Egypte, 4to. Paris, 1848.

[9] Examen Critique, 8vo. Paris, 1850.

[10] Uebereinstimmung einer Hieroglyphischen Inschrift, 8vo. Berlin, 1849; Lettre à M. de Rouge, 4to. Berlin, 1850; Ueber die fünf, Epagomenae Zeit- schrift der Deutschen Morgenländischen Gesellschaft, 8vo. 1852, II. 2; Scriptura Ægyptiorum Demotica, 4to. 1848; Numerorum apud Veteres Ægyptios Demoticorum Doctrina, 4to, 1849; Die Adonisklage und das Linoslied, 8vo, Berlin, 1852; Inscriptionis Rosettanæ Hieroglyphicæ Decretum Sacerdotale, 4to, Lipsia, 1853; Sai en Sin Sin, 4to, Berlin, 1851.

chiefly studied the demotic; while Lepsius,[1] now a veteran, continues steadily to advance various branches of the study; Miss Corbaux[2] and Mr. Poole[3] in England, S. Orcurti at Turin,[4] P. Seschi in Rome,[5] all profess in essential particulars the same principles of interpretation; but it is not here the place to discuss the relative claims of so many contemporaries, who, one and all, in different proportions and ways, have elevated the study into the rank of a science. M. Seyffarth,[6] indeed, has steadily continued his attacks on the system of Champollion since the publication of his "Rudiments," in a series of minor writings.

[1] Lepsius' recent works are Einleitung der Chronologie, 4to. Berlin; Ueber den Apiskreis, Zeitschrift der Deutschen Morgenländischen Gesellschaft, 1853, vii. 1848-1849; Aegyptische Denkmaeler, folio Berl. 1850; Ueber den Ersten Aegyptischen Lotter-Kreis, Abhandl. d. K. Akad d. Wissench. 4to. Berlin, 1851; Ueber der Zwolfte Konigdynastie, ib. 1853.

[2] Journal of Sacred Literature, i. 5.

[3] Horæ Ægyptiacæ, 8vo. London, 1851.

[4] Esame di nuovo Principio di lettura dei Geroglifici, 8vo. Torino, in the Cimento. Fasc., vii.; Catalogo dei Monumenti Egizii d. R. Museo di Torino, 8vo. Torino, 1852.

[5] Bull, 1852, Rev. Arch. iii. 821, ix. 246.

[6] De Obelisco in Porta del Popolo in Hermap. trad.; Repertorium der Deutschen Litteratur Jahresbericht der Deutschen Morgenländischen Gesellschaft, 8vo. 1844, ii. 32; Verhandlungen der ersten Versammlung der Orientalisten, 8vo. 1845, p. 58; Bemerkungen ueber das Turiner Hymnologium, Jahresbericht der Deutschen Morgenländischen Gesellschaft, 1846, p. 71; Recension von Champollion's Hieroglyphen System in Jahresbericht Litteratur, 202-3; Die Phönixperiode, Zeitschrift der Deutschen Morgenländischen Gesellschaft, 8vo. 1848, ii. 63; Recension von Lepsius Chronol. Egypt. Repert. l. c. ii. 1; Recension von Lepsius Todtenbuch, ib. 1845-6; Grammatica Aegyptiaca, Theolog. Schrift. d. alt. Aegypt. Bemerk. d. Mythol. 1855. It is impossible to follow all the miscellaneous researches, such as those of M. Beck, die altesten Bewohner Aegyptens, 8vo. Berl. 1845; Saalschutz (T. T.), Ueber die Hieroglyphen-Entzifferung, 8vo. Konigsberg, 1851; Description of the Mummy of Lady Chonse at Bath, 8vo. Wallingford, 1852.

He has found devoted followers in MM. Uhlemann[1] and Parrat.[2]

Having thus far succinctly traced the history of the discovery of the mode of reading this extinct language, every hope of the recovery of which had at one time been lost to Europe, it is now necessary to enter upon the considerations of the particular nature of each class of hieroglyphs, their script or mode of writing, the nature of the hieratic and demotic writing, and some account of the purport of the inscriptions and of the literature. Without this, it is not possible to appreciate either the extent of the discovery, and its importance in universal history, or the scope and object of the colossal monuments, magnificent temples, and remarkable sepulchral remains with which Egypt abounds. Aided by the light of philology, the present age penetrates the gloom of thirty centuries, and unseals the closed lips of the dead.

The writing of the Egyptians was peculiarly monumental, and was principally employed for the temples and public edifices. It was also used for all the ordinary purposes of life, being painted or inscribed on wood, papyri, terra cotta and various other substances, and incised or engraved on the various kinds of stone, such as granite, basalt, breccia, calcareous stone, and on wood, glazed terra cotta, &c. On the earliest sculptures the hieroglyphs are in a flat bas-relief raised above the surface of the subject; while in the incuse or *cavo-relievo* style, as it has been called, they are sunk below it. There are, however, in this style great differences in execution. Sometimes, both at the earliest and latest period, the objects

[1] De Veterum Ægyptiorum Lingua et Litteris, 8vo. Lipsiæ, 1851; Inscriptionis Rosettanæ Hieroglyphicæ Decretum Sacerdotale, 4to. Lipsiæ, 1853.

[2] Le Nilomètre, a fly-sheet published at Porrentruy, 1853.

are executed in a convex relief, with all the details and extremities, as the eyes, fingers, and toes, carefully indicated. At other times they are sunk quite flat at the bottom, the mason relying upon the profile or outline to convey his meaning. Generally they are placed between two lines, whether horizontally or vertically, as the case may be, of the same colour as the hieroglyphs; but they are often distributed promiscuously in the field, and sometimes appear both horizontally and vertically—an arrangement which some have called *diphthong*.

The hieroglyphs were generally coloured on the great monuments when complete, and three principal kinds have been remarked by M. Champollion:—

1. Sculptured, but not painted.
2. Sculptured and painted.
3. Drawn in outline with a pencil, and then painted.

Beside which they may be classed as—

5. *Polychrome*, or painted with various colours.
6. *Monochrome*, or having only one tint throughout the inscription.

As it is probable that all were painted, the first class can only apply to certain inscriptions of which the colours have disappeared. The second was that in use for monuments of the highest importance. On these, by means of simple primitive colours and flat tints, they endeavoured to imitate conventionally the objects which the hieroglyphs represented: thus, the heaven was coloured blue, the hills red, the moon yellow; men with red flesh, and white garments, the folds of which are sometimes traced in red; females, yellow with red or green dresses; parts of men and animals red; and animals by their proper colours, as a lion, yellow; jackall, black; goose, red; chætodon, wasp, reed, blue, and yellow.

On the same principle wooden objects were coloured yellow; plants and bronze objects, green; edifices, temples, &c., blue; objects of earthenware, red; and iron the same colour; glass, blue, with red below, to show the liquid it contained. But on the coffins and tablets the colouring is by no means so regular. Sometimes the garments are all green, and at others a kind of confusion of colours takes place, all colours being indifferently applied to the objects.[1] On certain tablets and other objects on which the hieroglyphs were executed in less detail, the second manner was used, as on a tablet of the twelfth dynasty;[2] on another of the thirteenth dynasty, they are green;[3] and, on a third of the nineteenth dynasty, yellow.[4]

The beautiful appearance which the tombs presented, and the gay and artistic effect produced by lines of pure hieroglyphs, appropriately coloured with simple colour, to imitate the objects they represent, will be admirably seen in the plate M. Lepsius has given of part of the tomb, now at Berlin, of Mer,[5] a prince, son of Cheops. Alphabetic writing, compared with it, is as mean and tasteless as the Frank dress compared with the Oriental costume. A style fainter in its tone will be seen[6] on another tomb; others at Ibsamobul show the style of colour prevalent during the nineteenth dynasty. This forms the class called by Champollion pure hieroglyphics. It is evident, that so elaborate a system of writing was not calculated for monuments, unless they were of the greatest importance, as they are a series of small illuminations. Consequently, for the books or rolls of papyri and other objects, such as sarcophagi and tablets, another kind of hieroglyphs, to which the term

[1] Grammaire Egyptienne, fo. Paris, 1836, p. 7.
[2] Sharpe, Eg. Inscr. Pl. 7. [3] Ib. 15. [4] Ib. 1.
[5] Lepsius, Denkmäler, Abth. ii. Bl. 19, 20. [6] Ib. Bl. 90.

linear[1] has been applied, were used. These were either engraved with a pointed tool when cut, and traced with the reed, when written, in black or red ink; and the following little table will show the manner in which they were produced, by tracing the outline of the object in a conventional manner and in one thick line, which preserves all the characteristics of the form of the objects: they are in fact, a kind of abridgment of the hieroglyphs. These bear the impress generally of much spirit and elegance, although some of the sixth dynasty and of the fourth resemble scrawls such as would mark incipient essays at the art of writing. The linear hieroglyphs are indeed capable of many minute divisions and subdivisions of style, according as they approach to or recede from in their finish the pure hieroglyphs. They form a very large class and portion of the writing. They are generally black; but certain directional parts, as the heading of chapters, are in red—

"*Adoration to* the sun, who sets from the district of life" (the west). Here the words "Adoration to" are in red.

The next point for consideration is the disposition of the hieroglyphs, which are arranged in vertical columns, reading from the top of a column to its base, then to the top of the next column, and so down the whole series of columns, in the same manner as the Chinese, or in horizontal lines. They sometimes face to the left. For example: in an inscription at Medinet Haboo, the god Phtha, or Vulcan, thus addresses the King Remeses III.:

[1] Champollion, Grammaire Egyptienne, p. 13.

"I have given thee thy day upon earth like the sun—thy dominions on earth like Horus, the son of Isis;" in which the line to the left is to be first read, then that to the right.

In these two instances the animals face to the left; but in many others they face to the right, which is their most usual direction, as[1]—"A peace-offering to Ra, (the sun), lord of the horizon, great god, superior of the gods."[2]

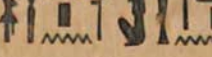
When they refer to persons or objects, they are arranged symmetrically, facing the same way as the objects to which they are attached. But the other mode of reading, from the last column facing to the first or retrograde, is common even on monuments of an early period. Thus, on the celebrated sarcophagus of Sethos I., commonly called Belzoni's,[3] all the lines read the other way, as

"This great god is led to the gods of the gates—towed along in space." He says: "Lead ye me to the gates, adore ye me throughout your gates; pull your cords, lead ye me by them;" which is part of one of the speeches of the Sun to the gods, who lead him through space in the hours of the day.

[1] Lepsius, Todt. Taf. v. 15. [2] Champollion, Grammaire Egyptienne, p. 19.
[3] Sometimes in the same column of hieroglyphs the titles of the god face one way, and the speech another. [4] Sharpe, Egyptian Inscriptions, Pl. 64.

Generally the horizontal lines read from the way the animals face, as—

"The words of Tum (the setting sun), who dwells in the temple. Come to me, beloved son of my race, the god beloved of Truth; I give to thee the throne of the sun (Ra), the glory of Seb (Saturn), the dominions of Horus, as king."[1]

Here, of course, the line commences from the left; the lines often face to the right. Sometimes the horizontal lines read backward, as on the coffin of the King Nekhtherhebi in the British Museum, and as that of Gu-her, at Paris, as in the following example:  "says the person of that great god of the west."[2]

Now the mode of detecting this was, of course, by observing the recurrence of certain groups of characters, and then finding how they were divided, which gave a clue to the sequence of the lines, and by paying attention to the manner in which the lines usually commenced.

It will be seen from these examples that the signs are packed with great care and skill according to their relative length and breadth, so as to leave no gaping space to the eye, and yet avoiding an array so close as would prevent their being easily read. On the papyri the columns are generally vertical with some horizontal lines, on the stèles and other monuments placed indifferently, according to the nature of the monument.

[1] Champollion, Notice, p. 297.

[2] Sharpe, Egyptian Inscriptions, Second Series, Pl. 10.

It is not possible to determine the actual number of hieroglyphics used by the Egyptians, because the language was capable of indefinite expansion, at the will of the scribe. Bruce had reckoned them at 514; Zoega, 958; Champollion, in his "Précis," 864, which he thus classed:—

Celestial Bodies	10
Human Figures	120
Limbs	60
Wild Quadrupeds	24
Domestic Quadrupeds	10
Limbs of Quadrupeds	22
Birds and Parts of Birds	50
Fishes	10
Reptiles and Parts of Reptiles	30
Insects	14
Vegetable Kingdom	60
Buildings	24
Furniture	100
Attire	80
Tools and Instruments	150
Vases and Cups	30
Geometric Forms	20
Fantastic Forms	50
Total	864

The Chevalier Bunsen's list gives:—

Ideographics	620
Determinatives	164
Phonetics	129
Mixed Signs	56
Total	969

Some of these, indeed, are repetitions; but allowing for the number of new forms discovered by M. Lepsius, and published in his Monuments, they may be supposed to be, in round numbers, 1000. In the table of his Grammar Champollion gives only 342, and in the Index of his Dictionary, 750.

The hieroglyphs consist of the representation of the heavenly

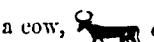
bodies,—the sun, the moon, whether young or old, the stars; the human race, in all its various actions; the gods, in all their combinations and attire; the members of the body; divers kinds of quadrupeds, whether domestic or wild; birds, their eggs and plumes; fishes, insects, and reptiles; vegetables, fruits, and flowers; all the various objects in use among mankind; attire for the head, and feet, and body; the objects of their toilet; their weapons, their musical instruments, chests, coffers, and funeral apparel; several sorts of vases, and such like objects; parts of edifices, and other geometric forms; besides many fantastic shapes, combinations of men and animals, and a vast array of unknown forms. Everything the eye could see and the hand delineate was capable of entering into the system, although perspicuity rendered the employment of only a limited number of symbols necessary.

IDEOGRAPHS.

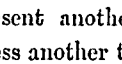
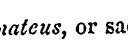
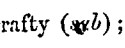
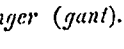
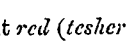
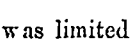
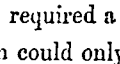
The hieroglyphs which represent only one *idea* have thence been called by hierologists *ideographs*, or painting of ideas, and are the class described by Clement as tropic, or conveying ideas by imitation. They are figurative or mimic, and are the remains of the primitive language, in which each idea was depicted by one object. This class of characters is by far the most numerous of the whole language, although necessarily very limited in its application, as not capable of too extensive an application. It was, however, very possible to compose short sentences of ideographs, and an approximation to one is mentioned by Plutarch,[1] who states that on the pronaos of the temple of Sais there were an old man, a youth, a hawk, fish, and hippopotamus,

[1] De Iside et Osiride, c. xxxii.; Orcurti, Catalogo illustrato dei Monumenti Egizii del Regio Museo di Torino, 8vo, Torino, 1852.

which may be thus restored— meaning, "O all, whether old or young, know that the gods hate impudence!" It is in the texts of the temple that the greatest number of ideographical signs occurs; for these grand inscriptions received a more dignified appearance, and more poetic development, by the insertion of the full representation of the subjects mentioned in the texts. In the scenes, too, of offering various rich and valuable gifts to the gods, the objects themselves are frequently repeated in the texts.

In the formation of the ideograph signs to express language two modes were called into action. In certain physical and other objects it was possible to represent them directly, that is by *mimic* characters;[1] thus a cow,  *aha;* is often represented by a cow, or a cat, , *shau*, by a cat. In the names of gods too, direct representations were invaluable, because there could be no ambiguity as to meaning; for , a hawk-headed god bearing the disk could mean no other than *Ra* (the sun); and an ibis-headed god, certainly was *Tet*, or Mercury. But the expression of products required more ingenuity; thus to express milk, the Egyptians used a vase, with a conventional representation of the stream rising from it; and oil is represented by an oil-jar ; fishing by a pelican seizing a fish, or fishing ; all of which are direct representations of the idea intended to be conveyed. But it is evident that the circle of ideas thus conveyed must be very limited. How, for example, could qualities or adjectives be written, how mental emotions? To effect this they adopted the system of metonymy,

[1] Chev. Bunsen, Egypt's Place in Universal History, p. 350.

or metaphor; and as the poet applies the image of one idea to represent another, so the sacred scribe used one object to express another than itself. These are the indirect ideographs, or what Clement called the *tropic*, and Champollion *symbolic*. Thus  a jackal, was used to express *knowledge*, a *hierogrammateus*, or sacred scribe, or wise man, because that animal was crafty (*seb*); and an ape standing upright was used for *anger* (*gant*). In the same manner a , a red bird, meant *red* (*tesher*); and spotted skin, , *pied* (*ab*). This, however, was limited in its application, as the refinement of language required a great many words to be expressed, which this system could only do by ramifying into so many ideas as to induce confusion. Hence another principle was called into play. They used the instrument to express the product or the effect, as  a pen, vase, and pallet, to signify writing; a hand-plough  , to mean hoeing or digging; an eye  to signify seeing. How else, for example, could the idea of sight be conveyed? and how much more compendious it was to adopt means so simple as the pen and the plough, than to depict at every turn a scribe writing or a ploughman at work? This abridgment of labour is so natural that it may be readily conceived it was soon adopted into the language. If, however, the instrument was used for the product, or the cause for the effect, in other cases the product was used for the instrument or the effect for the cause: thus, a pool of water was used for "the river"  which produced it; and a bunch of papyrus  , or a bee or wasp  , for "Lower Egypt," because

there they swarmed; a man standing and holding two camelopards means the "country of *Hesi*," the ancient name of the regions where these animals abounded and were captured.

There was also another form of ideograph which placed the part for the whole by a pictorial synecdoche, as the head of a bird to signify birds; and pupils of the eye, for eyes; the fore part of an oryx for the whole, and to signify pride. This indeed rather belongs to a system of tachygraphy than to metaphysical notions connected with the principle of the formation of the ideographs.[1]

In the same manner, according to the genius of the people, the living emblems of deities were employed to express the names of the gods themselves, as an ibis on its standard for *Tot* or Thoth, a seated ass, for *Set* or Typhon, a crocodile on a pylon for *Sevek* or Souchis, a feather for truth. This mode has been called the enigmatic or obscure, because certain mystical physical notions are assigned by writers like the author Horapollo as the reasons why these animals symbolise particular gods. Profounder researches, however, into the genius of the language itself will no doubt simplify many of these difficulties. It appears, however, from the ritual that there undoubtedly was an inward or esoteric meaning.

[1] Champollion, Grammaire, p. 23; S. Orcurti, in the Cimento, 1852, xi., p. 7.

DETERMINATIVES.

THE ideographic hieroglyphs are, however, susceptible of two divisions,—those which represent one idea, and are consequently limited, and those which represent several modifications of the primitive idea, and which are consequently extended into determinatives, or generic. This classification, first made by Chevalier Bunsen, enables above one hundred of these signs to be made into a distinct class, which are extensively distributed throughout the texts. The discovery of the nature of these hieroglyphs is the most brilliant portion of the Grammar[1] of Champollion, as the clear analysis and exposition of them is mainly due to his labours, to which others have been only able to make a few additions. The determinatives necessarily arose out of the metaphorical or tropical ideographs by extending the nature of their meaning. Like the ideographs, they are placed *after* the groups of phonetic hieroglyphs which produce the sounds of the words—with this difference, that the ideographs are preceded by one constant group, while the determinatives have many. Thus the ideograph , a lotus flower, is only preceded by the group reading . *s, sh, n, i, n,* and never means anything else but the determinative. The skin of an animal was capable of being placed after all phonetic groups referring to skin or leather, or the objects made of it, as , *bs*, leather; or after all animals or quadrupeds, as *aani*, an ape, *rir*, a hog, and even by a kind of pictorial pleonasm after ideographs, as *hu-t*, a wild goat, where the figure of a goat is seen preceded by the phonetic group of its name, and followed by this determinative.

[1] Champollion, Grammaire, p. 83.

If the *ideographs* resembled in their nature the picture-writing, pure and simple, of the Mexicans, the primitive symbols of the Chinese, the rude figures which untutored savages sculpture on rocks, or paint on their forms, their garments, the bark of trees, or other fragile remains, the determinatives are allied to the keys or radicals, as they are called, of the Chinese language: celestial phenomena, gods; various kinds and conditions of men, their passions and affections; limbs; animals; in fact, the whole circle of ideas, have their assigned determinatives—about two hundred in number. They follow their phonetic groups which give the special idea. So in the Chinese system, 244 characters are affixed to other characters which convey either an idea or its equivalent sound. For example, in the two systems, , *hat*, silver, 銀, *yin*, silver, are both constructed upon the same plan. In the Egyptian group the character to the right is white, that to the left the determinative of all metals. In the Chinese it is composed of a character to the right, reading *hăn* and *kăn*, which has the meaning of "a limit," and used as a sound, and the determinative of all kinds of metal to the left.[1] While, however, in the Egyptian system the phonetic part has retained its regularity, in the Chinese this has been lost, and it is not possible to trace clearly the relation between sound and character; but on the contrary, the *determinatives* in this last have gained entire mastery over ideographs and purely phonetic groups, and ejected them, giving to the language a more regular literary type. It was, however, the great development of the *tropical* nature of Egyptian ideographs which limited the number of hieroglyphs used; for it became easy to expand their use and gradually to supersede the others. Thus the skin replaced at least twenty

[1] Bunsen, Egypt's Place in Universal History, p. 535.

forms of animals, a star all the constellations, a man all the male gods of the Pantheon and various functions, a drop of blood all the parts of the human form. This was an immense saving of labour; and it enabled all subjective as well as objective ideas to be conveyed.

In the Assyrian cuneiform the same class of characters make their appearance; but they precede the phonetic signs, and do not follow them, except in a few special cases, which have determinatives both at the beginning and the end. Thus the is prefixed to the names of all countries, and another is added after the group if the country was plain, the phonetic group being a kind of kernel enveloped by two determinatives. But the arrow-headed script is more conventional in type, and has departed still further than even the Chinese from the condition of picture-writing; while the determinatives which it employs are comparatively few in number, as the language no longer coasted round the old symbolism, but had launched into the ocean of sound.

The interpretation of the ideographic hieroglyphs might at first appear a long or hopeless task: but the following aids to its clue existed:

1. Their own representation explained their meaning: thus a whip, means a whip; means a trussed duck.

2. The images or pictures that accompanied them aided their interpretation, as a stick, over a man holding a stick; a truss of flax over men gathering flax.

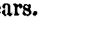
3. The explanations of the Greek and Roman writers threw light on others; for example, Clement[1] has stated that a circle

[1] See Lepsius, Lettre, p. 24 *et seq.*

⊙ means the sun; Horapollo that a goose means *son;* Ammianus Marcellinus that means king.

4. Ancient translations, such as the Rosetta stone, which shows that means festival; the inscription of the obelisk translated by Hermapion that indicated the world.

5. The context, as where it is said a man walked with his feet, or heard with his ears.

6. Phonetic groups of hieroglyphs which preceded the ideograph, as *art* for *arut*, milk;  *set* (*saat*), the tail of an animal.

7. Variants, or different symbols, of which the meaning was known appearing in the same name or word, thus a sphinx, being found in the name of Nectanebo, instead of , a basket, known to mean *lord*, showed that the sphinx also had that meaning.

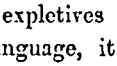
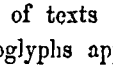
8. The phonetic hieroglyphs placed after them, as a guitar meaning *good*, in Coptic *nofre*, found followed by *fr*, as NeFeR

9. The employment of ideographs to represent certain sounds or syllables, at the time of the Romans; as a scarabæus for the sound *TA* or *TO*, the Coptic word for world, an eye with its lid painted for the syllable, AN for sight, "beauty," aided to explain their sense.

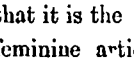
10. The names of the gods and kings, as found in the different authors, gave the transcription and meaning of several

signs. Thus it is proved that is Tet, or Thoth, from the name Τουθμωσις of Manetho, and the name of the god Θωθ, Thoth.[1]

Every complete Egyptian word, which did not express a purely abstract idea, consisted of two portions, the phonetic, or sounds which fixed its special meaning, and the determinative, which gave its generic one; but besides these, many groups contain signs neither requisite to complete the sound, nor conveying any portion of the idea. These may be called determinatives or expletives of sounds: and as they enter largely into the language, it is necessary to consider their phenomena.

An examination of texts shows that in several instances determinative hieroglyphs appear in groups, followed by a second determinative, which is the real one, fixing or determining the idea. An obvious example is the name of the god Set or Typhon, written thus  , *st*, then a block of stone, finally an ass-headed god. Here the block of stone has no connection with the meaning of the name of Set; it is introduced because the name of the god was pronounced in the same manner as *Set*, the rock. It did not mean that *Set* signified a rock; for, on the contrary, the name of the god meant the ass, the special object of worship of the neighbouring nations of Egypt. In the same sense, the name of the god Hor-us was written  *Hr*, and then a *road*, which determined the sound Hor to be the same as that of the word *road;* finally the hatchet, which determined the preceding group to mean a god. A still more remarkable instance is

[1] For the condition and modes of interpretation, see also Sharpe (S.), Rudiments of a Vocabulary of Egyptian Hieroglyphics, 4to, London, 1837.

the odd way in which the word *kan*, the Coptic *sjaun* or *sjne*, a minister or servant, is written in certain inscriptions; thus  the two first hieroglyphs and *kan*, the leg, show that it is the same word as *kan*, a knee; the next sign is the feminine article of the word knee; the next is an angle, pronounced *kan;* the last, the man, shows that it is a human function. This system may appear paradoxical; but the instances in which it was adopted are comparatively rare. It, of course arose out of the increased development of the language, and it explains the use of *tropic* hieroglyphs, which came into use to represent ideas which had the same sound as themselves; for in all primitive languages the number of syllables soon became exhausted, while the number of ideas to be expressed rapidly increased.[1]

PHONETIC HIEROGLYPHS.

From the consideration of the various classes of ideographs, it is now necessary to turn to that of the phonetic hieroglyphs. A vast gulf divides the two systems of representing idea and sound; the invention of an alphabetic character may be regarded as the great triumph of written language. The original discovery of this use of the symbols by Young and Champollion has been pointed out; but it has yet required a long time to overcome the prejudice and preconception that birds and animals, instruments and utensils, could be employed in the same manner as the conventional marks, the old familiar letters of the alphabet, with which all ideas are now expressed. Still the most obstinate sceptics could not deny that they occurred in the same order and subject to the same conditions as if they were real letters; and as this showed, conversely,

[1] Cf. M. de Rouge, L'Athen. Franc. 1852, p. 106.

that they were actually so used, the demonstration was mathematical.

The principle of phonetic hieroglyphs is seen in the determinatives; because, as it became possible to attach a value or meaning to a character independent of its actual direct representation, causing it to represent many ideas, so it became easy to use it in order to convey such ideas as had the same sound. An excellent example of this is the *eye*, as cited by the Chevalier Bunsen.[1] Thus the eye in the hieroglyphs has the phonetic value of , *ar* or *al*, and has the sense of—1, the eye; 2, to do; 3, a child. Examining these words with their Coptic equivalents, there are—1, ⲁⲗⲟⲩ *alou*, the pupil of the eye; 2, ⲁⲗ *al*, a rare form of the verb ⲣ *er*, to do; 3, ⲁⲗⲟⲩ *alou*, an infant or child. As speech is in all cases the elder sister of writing, it is hence apparent that the eye is used to express the idea, as a *rebus* with which children are now amused, without being conscious that it is the infant writing of mankind. It is not very easy to determine the cause which introduced this new kind of metaphor into the system; yet the paucity of sounds to express ideas, and the early use of monosyllabic words, seem to suggest to the mind such a mode of writing. Order, system, perspicuity, were essentials to understand the written language; and as these had curtailed the infinite array of ideographs, it became necessary to introduce another principle besides metaphor, which would have remained obscure, and would not have sufficiently restricted the number of symbols. Supposing too, for example, that one man read to another a series of purely ideographic signs from a wall or manuscript which the other did not see, would not the mind of the hearer have been bewildered with a

[1] Egypt's Place, p. 849.

chaos of sounds familiar to him, yet presenting no sequence of ideas? Would not the reader have discovered the imperfection of the system, and at once seen the remedy of substituting ideographs for ideas having the same sound, and adding them in to the text to express grammatical and other forms? Or again, conceive that the scribe was ordered to write down foreign words, for Egypt was not the only country even in the ancient world, would he not naturally take some symbols the nearest in sound to his ear, and thus invent the germ of a phonetic hieroglyph, the simplicity of which must have struck some intelligent observer? The Aztec picture-writers, who came down to the ships of Cortez, could depict all that they saw, but could not represent the sounds which they heard; but the more developed language of China easily selected characters approximate in sound to roughly spell the terms of Buddhistic and those of Christian doctrines. The Egyptian always did so when he came in contact with foreign names; and as he had developed a more perfect system, by no means found such a proceeding so indispensable. For example, even under the Ptolemies the scribes appear to have recurred to the principles of the old system: thus the name of Arsinöe[1] occurs written in two characters—one a keeper or guardian, *ari*, , the other a brother , *sen*, the two reading *Ari sen*, and offering an ingenious allusion to her being "the guardian of her brother." But it is evident, that if throughout the system one hieroglyph could have represented any number of ideas having the same sound, confusion would have been worse confounded; and it consequently became necessary to select a certain number of them, which the memory could readily retain and the eye with

[1] Lepsius, Lettre, p. 35; Champollion, Précis, p. 356.

facility detect, to perform the important function of a syllabarium. Here several considerations present themselves.

It was essential that every hieroglyph selected should be as universal as possible, which involved the analysis and decomposition of all the polysyllabic words, or agglomerations of monosyllables, which existed in the language at the time; but when one monosyllable was found to represent several ideas, and it terminated in a consonant, it was more compendious to introduce a special hieroglyph to express all these ideas. The analysis, too, was rendered partly incomplete by the necessity which existed of selecting very obvious hieroglyphs, such as all could understand when they saw. Now it would appear that at the time of the formation of the written language the words chiefly consisted of monosyllables in which there was a consonant followed by a vowel, or a vowel by a consonant. These words bear, in the names of animals, distinct traces of being imitations of the sounds which the animals made, as—

EGYPTIAN NAME.	SENSE.	EGYPTIAN NAME.	SENSE.
Shai	A cat.	*Ui*	A chicken.
Ab	A lamb.	*Ha*	An eagle.
Ba	A goat.	*Bak*	A hawk.
Au	A cow.	*Mu*	An owl.
A-uo	An ass.	*Khaper*	A beetle.
Mau	A lion.	*Khab*	A wasp.
Su	A goose.		

Remains of these primitive words exist in the Coptic,[1] and such perhaps are inherent in all languages, although it is not possible to trace this distinctly in words conveying the mental emotions, the passions or actions, yet there are sufficient to show the selection of the hieroglyphs for the purposes of sound. Had

[1] Champollion, Précis, p. 332; Mr. Osburn, Antiquities of Egypt, p. 89.

the language been formed when long experience had demonstrated the minute analysis of language into consonants and vowels, the system would have approached an alphabetical perfection. For example, the Egyptians could express *ba* by a ram , and , *bu*, by a leg; but they had no *be* or *bi*, because such did not exist in the genius of their language. This they were obliged to replace by , *fi*, if required.[1]

It is agreed that the most developed systems of writing have already passed through a syllabic state while in transition, and the Egyptian transcription of the Aramæan words shows that they consisted of agglomerations of monosyllables; but by degrees the vowel has disappeared, and the consonant alone remained to represent the idea. Hence it is probable that in Egyptian, the primitive words and hieroglyphs of sound consisted of a consonant followed by a vowel; but by degrees the vowel had become separated off into another syllable, and the two original monosyllables were fused into a monosyllable of advanced state. It was thus that in the Egyptian such words as *ma*, *na*, became *men*, and *ru ā*, *rā*.

The condition of the ancient language was purely *syllabic*; and if it ever attained to a greater degree of alphabetic writing it only did so compared with other languages. It is necessary to consider, in the first place, the syllables commencing with a consonant and terminating with a vowel, for these are the ultimate principles of all words.

Champollion, in his first analysis, considered that he had so far improved on the system of Young as to have demonstrated that the phonetic *hieroglyphs* were employed for the sound which was represented by its initial vowel or consonant. Ac-

[1] Lepsius, Lettre, p. 36.

cording to him, the syllabarium was formed on some such principle as the following:—[1]

SYMBOL.		SOUND.	NAME IN COPTIC.
	Eagle	A	A-khoom
	Reed	A	A-ke
	Hand	T	T-oot
	Basin	S H	S-jni kigi
	Owl	M	M-onlag
	Sieve	KH	KH-ai

And so forth.

But this principle appears so far radically wrong that *each character must have originally had the entire sound of the name of the object it represented.* This is evident upon a consideration of the syllables which have two consonants, such as—

SYMBOL.		SOUND.	NAME IN COPTIC.
	Strap	Me S	Mouss
	Horns	Ta P	Tap
	Tie	Te S	Toeis

Although owing to the deficiency of the Coptic, but few examples can be traced in that language, yet it may never-

[1] Précis Egyptien, p. 360.

theless be considered as certain that the whole system was constructed on the same principle at the time of its formation, and that it is only the confusion at the time of the Greeks and Romans which can have led to any other conclusion about the earlier alphabet. However, the primitive names still remain in a few instances in Coptic, as—

SYMBOL.		SOUND.	SOUND IN COPTIC.
	A stake	AA	Aoo
	An angle	KA	Kaah
	A sieve	KHI	Khai
	A mouth	Ru	Roo

rendering it probable that all the others were originally employed on the same system.

It has been mentioned that at an early period the vowels became separated from the consonants, which were necessary to give them sound, and to which they were inherent; but they continued to appear constantly written after the hieroglyph of the syllable to which they were inherent, thus—

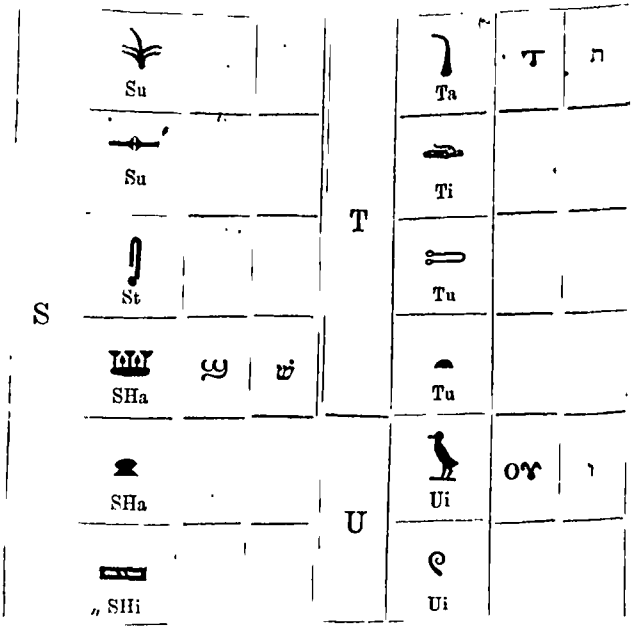
A mat		Pu	was written	
A hole		Mu	was written	
An angle		Ka	was written	

The following table will exhibit as nearly as possible the

powers of the syllables, and their equivalents in Coptic and Hebrew :—

A	Aa	ⲁ	א ה	II	Ha		
	Aa		ע		Hà		
	Au		א		Hà	ⲥ	ה
B	Ba	ⲃ ⲟⲩ ϥ	ב		Hu		
	Bu	ⲃ ⲟⲩ ϥ			Hu		
F	Fi		פ ו		Hu		
G	Ga	ϫ ⲅ	ג	I	Iu		
	Ga				Iu	ⲓ	י
	Gi			K	KA		
H	Ha	ⲏ ⲁ	ה		KA	ⲕ	כ

KH	KHa	ח		M	Ma		
	KHà				Mu		
	KHa				Mu		
	KHa			N	N		נ
	KHi				Na		
	KHà				Nu		
	KHu			P	Pa	פ ף	ם
L	Lu-Ru	ר ר	ל ר		Pu		
	Ru	ר	ו	Q	Qa	ק	ף
M	Ma	מ	מ כ	S	Sa		ם ש
	Ma				Su		



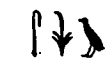
This table exhibits all the syllables commencing with consonants and ending with vowels, and consequently the nearest approach to the alphabetic. It corresponds as nearly as possible with the Coptic alphabet, which contains thirty-two letters, comprising the whole Greek alphabet, in order to represent all the sounds of the Greek words introduced into the language, and seven additional sounds which were not represented by the alphabet of that language; but ten of the letters of the Greek alphabet are used for Greek words only, and the true number of Coptic sounds is consequently reduced to twenty-two. It is, however, possible to reduce the hieroglyphical alphabet to even narrower limits, by admitting that there was only a dialectical variation in the form of *t* and *k*, in

that of *h* and *ḥ* often represented by the same hieroglyph. This alphabet was of universal application, appearing throughout all the successive periods of the monarchy; and the fifteen letters of which it is composed may be considered the remains of the original sounds used by the inhabitants of the Nile.[1] It was, however, not the entire phonetic system in use, because coeval with it another syllabarium was employed, which consisted—

1. Of syllables consisting of an initial vowel and a consonant.

2. Syllables composed of two consonants.

It has been already shown how certain syllables had hieroglyphs of their final sounds attached to them, in order to aid the memory in keeping their true sound; but there was also another principle in use even for the universal syllables: sometimes the initial sound was expressed before it by a hieroglyph having the same value; thus—

PA	was written	Pp A
SU	,,	 Ss U
KHA	,,	KH kh A KH kh kh A

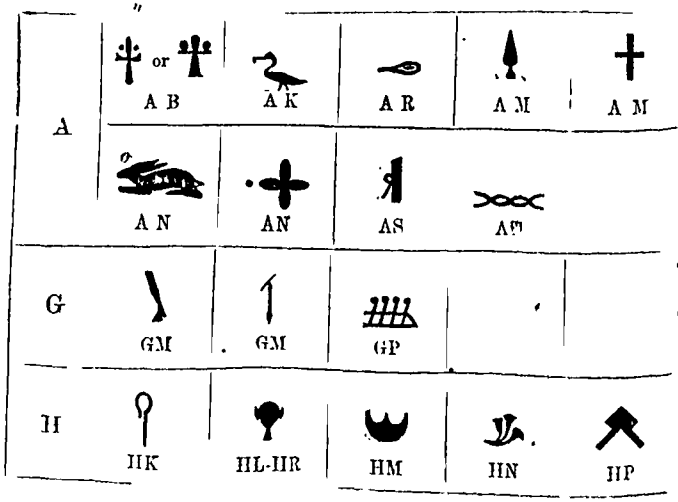
Here by casting the eye on the table it will be at once evident that *pa* is = *pu pù*, *su* is = *su su*, and *kha* = *khi*, *kha*, *khu*. This mode

[1] Bunsen, Egypt's Place, p. 554; Lepsius, Lettre, l. c.; Dr. Hincks, on the Power of the Alphabet, l. c.

of explaining one character by another is of the utmost importance; for by it the value of several sounds is determined, which otherwise it would be impossible to assign. They occur constantly before the syllable ending in two consonants; such as , *men*, a building or gift; , *hr*, a face.

One of the earliest discoveries of Champollion was the principle of the interchange of signs having the same or nearly the same relative power; and in the names of the later monarchs of Egypt this was carried to a very great extent, as at that period the number of signs in use for phonetic purposes was very great; but at all periods the scribes indulged in slight changes: they sometimes would write *ruha*, the dawn, *ruhu*, or *pa*, the masculine article *pu* or *pi*. Although some have considered this a decisive proof that such signs were alphabetic, it is necessary to bear in mind the dialectical variations of words, and the vague manner in which vowels are used in Coptic.

The first division has



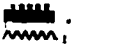
H	HP	HT	HTP		
K	KR-KL	KR-KL	KL-KR (?)	KM	KT?
KH	KH'N	KH-N	KH'PR		
M	MH	ML-MR	ML-MR	MS	MN
N	NB	NH	NM	NM	NM
	NS	NS			
P	PT(?)	PKH	PK		
S	SB	SB	SM	SN	ST.
SH	SH'N	SH'N	SH'T		

T	TB	TR	TS	TSR	
U	UAH	hUR	·hUR	UT	

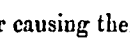
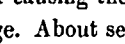
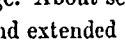
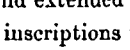
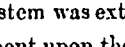
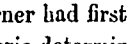
The vowels which came between these consonants were indifferent, according to the word pronounced; and as the name of the object was dialectically spoken in a different manner, in a slight degree, there was no ambiguity in this respect. These syllables were only interchangeable when they had the same power of vowels as well as of consonants, and in no case were they homophones or exchanged with those which ended in vowels. There are certain distinctions, too, here to be observed: the B sound has been in many Coptic words replaced by *v*, *f*, or *u*, the A by *e*, *o*, *ou*, or *oo*; the H and U, too, seem to have been equivalent, and the G, J and T are represented by the same hieroglyph. These hieroglyphs, when used, were generally followed by those of the more universal alphabet expressive of their final sounds, thus—

	M (n)	was often written		M N
	H (k)	,,		H K
	K H (pr)	,,		K H P R
	A (n)	,,		A N

In fact, they could either be used—1, by themselves, as

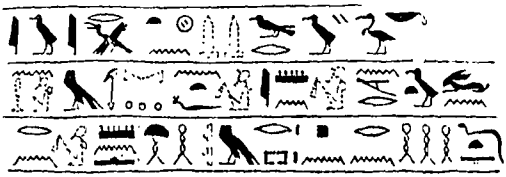
2, with their final and initial sound, occupying the second place in a group of three or more hieroglyphs, as ; 3, with their final sound, occupying the first place  .

But a more remarkable feature in the language was, that the same principle was applied to explain several ideographs by affixing phonetic syllables to them, which showed how they were sounded, without altering their meaning or causing them to be used for syllables in the body of the language. About seventy of these hieroglyphs have been discovered; and extended observations carried on upon a greater number of inscriptions will probably discover more, and show that this system was extensively used. In some respects it was an improvement upon the system of determinatives; because the mind more quickly apprehended the intention of the scribe than if the learner had first to spell and then discover the meaning from a generic determinative.

Hence every hieroglyph could be used in several ways. It could, in the first place, express what it actually represented by itself in the text as a direct symbol; for example—the eye  , generally used for the syllable  *ar*, could mean the eye itself; in which case, it had the signs, as  or  affixed, as the eye; in the same manner  is the hand. When, however, a sign generally had only its direct meaning, this mode of indicating its sense or meaning was not used. Another manner, in which the meaning of the emblem itself was rendered more easy to the reader, was to add after the sign the other sign or signs which spelt the sound of the word itself. In the first case, already cited, the bar, when sounded at all, was *u*, "one," and the semicircle  *t*, the—and they have nothing to do with the

sound of the other hieroglyph to which they are attached; but if the hieroglyph , a man seated holding a crook and halter, which means guardian, keeper, being itself the representation of a goat or ox-herd, is examined in all the various phases and forms in which it occurs, it will be found accompanied by a mouth, , and two oblique signs placed after it. These read RI, and show that the whole group was read , ARI, the Egyptian word for guardian or keeper, of which the Coptic word is ΑΡΕϩ (*areh*). It is as if to express the idea *hat*, first a hat was depicted, , and then the syllable AT was inscribed after it, as AT, to show that it was pronounced HAT. To us, who are in the possession of a perfect alphabetical system of writing, such a mode seems highly clumsy and imperfect; but it is to be remembered that alphabetical writing is the result of a slow development from picture-writing, and that it has been obtained by very slow degrees. China after 3000 years has not attained to it.

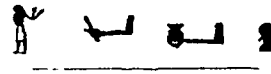
The *phonetics* were extensively employed throughout the texts; for the greater portions of the words which did not express abstract ideas were composed of groups of them, followed by determinatives, while auxiliary verbs, affixes, prefixes, and other parts of speech, were almost entirely composed of them. The following line from the inscription



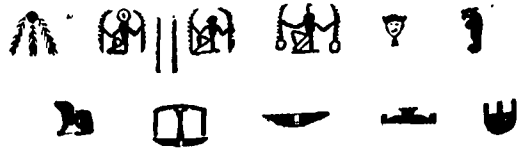
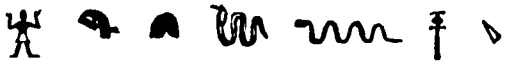
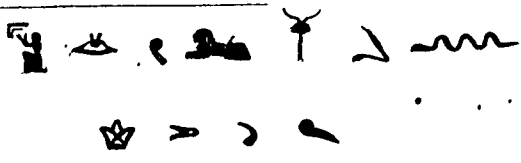
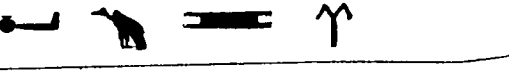
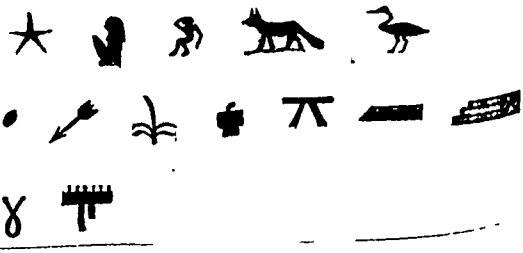
of the pedestal of the great obelisk of Karnak will illustrate

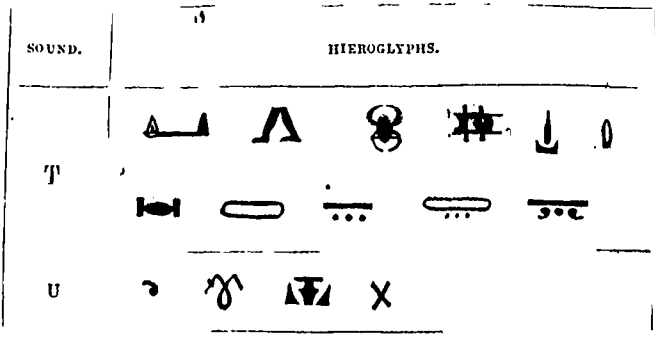
the proportion of phonetics and ideographs, the latter being printed in fainter lines[1]—being about one-fourth of the whole. This is the speech of the Regent, who says—"I have made two great obelisks; I have inlaid them with gold to my father Ammon, as wished; my name remains constantly at the gate of (his) house for ever and ever!"

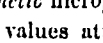
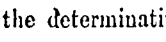
At the time of the twenty-second dynasty, who were of Babylonian origin, a revolution occurred in the phonetic hieroglyphs, which was continued till their termination. A great number of the ideographs had assigned to them a phonetic value, and were introduced into the texts either instead of the common phonetics, or to their exclusion. The reason of this change is enveloped in obscurity. Champollion called this a secret writing; but it was a natural outgrowth of the system which adopted symbols for sounds, and the existence of a great number of characters in the Babylonian writing, having the same sound, may have led to it. The following table exhibits the hieroglyphs thus employed.

SOUND.	HIEROGLYPHS.
Â	
A	
B	
F	

[1] Prisse, Mon. Egypt. Pl. 18; Bunsen's Egypt's Place I. p. 573 and following; Brugsch. Sai en Sinsin Pl.

SOUND.	HIEROGLYPHS.
H	
T	
K	
L	
M	
N	
P	
S	



The next question to be solved was the resolution of the groups. It is evident that as soon as the *phonetic* hieroglyphs had been discovered, and had their proper values attached to them, the decipherment of any group was a matter of ease. It was but to read the *phonetic* hieroglyphs, pay attention to the determinative, and the meaning of the word was obvious, if it existed in the Coptic dictionary; thus—  (*a*) reads *arp*, with two little jars, and is the Coptic *eerp*, "wine;"  *aak-t*, and a bunch of reads for its determinative, the Coptic *ake*, or *akhi*, is "reeds," the *t* being the feminine affix article. But the texts in some respects occasionally even here present difficulties. The language was always pictorial and architectonic; and the groups were consequently often squared or arranged in such a manner as to be more pleasing to the Egyptian eye, and so as not to leave spaces on the back-ground, which sometimes involved the displacement of a character. Thus the word , *ut*, "a father," is written as if it were pronounced *tef;* whereas it is evident from the Coptic that it was

pronounced *ioot.* This difficulty was, however, greater when less was known of the laws of the language than is now the case. In the great hieroglyphical inscriptions of the temples, in which the determinatives are complete pictures of the idea intended to be conveyed, even if the word was not to be found in the Coptic, there was no difficulty in the *interpretation* of the idea conveyed; but there was a much more serious difficulty in the discovery of the meaning of words of which no equivalent Coptic form remained, and of which there was only a *generic* determinative, a difficulty which some have conceived no genius could surmount.[1] The Coptic, after all, was a very feeble aid, and was probably used by Champollion rather as a justification to the world of the truth of his statements than as the means of his interpretations. Yet another mode of analysis, the *inductive*, still remained for words no longer to be found in the Coptic dictionaries. After examining the numerous passages in which certain uninterpreted words appear, it is evident *that the meaning which suits them in all instances is the true one.* In proportion as the knowledge of the hieroglyphs increases, the conditions of the unknown groups are more restricted, and their meaning more easily discovered.

Take, for example, a word, *han*, in its different forms. One passage proves that it means "to return." On a tablet of Amenophis II., at Philæ, it says, that in his third year the monarch came "returning" (*em han*)[2] from Ethiopia. That it does not record his "advance" from Egypt is proved by the fact of the names of the prisoners being recorded, and the sense of "return" stands good in every other known passage in which this word occurs. The greater the

[1] Klaproth, Examen. p. 15; De Sacy, Journal des Savans, 1827, p. 513.
[2] Champollion, Notice, p. 164.

number of examples examined the nearer the approach to the true sense. Such a mode of inductive analysis is strictly requisite in all cases, for it is impossible to fix the value of the whole phonetic hieroglyphs so strictly as not to admit of several having cognate powers. The long serpent, or viper, , for example, appears in hieroglyphical groups, which in Coptic have the sounds of *g*, *k*, *c*, *sh*, *sj*, *t*, or *th*, and in uninterpreted groups the *context* alone can determine which is correct. This must not, however, be considered true of all the syllabarium, for several of the phonetic hieroglyphs have a fixed, definite, unchanging value, and represent only one sound. Another circumstance which aided the analysis in a most remarkable manner, was the different ways in which the same group could be written. How this was discovered by Champollion in the comparison of foreign names of the Ptolemies and Romans has been already mentioned; but it was a principle which pervaded the whole language. The reason is obvious—the immense number of texts contained in the inscriptions and rolls of papyri relating to the dead, which were repetitions either of each other or of the same ideas, and which continued to be in use for several centuries throughout an extensive country, were constantly undergoing changes and modifications. The scribe had always the power of substituting one syllable for another, either from forgetfulness, caprice, or notions of improvement in the squaring of the groups, which often required equivalent horizontal for vertical forms—thus he wrote *sñ*, "they," or probably according to certain notions as to the respective groups preceding or following it. In these two groups it will be at a glance seen that there is an equation; consequently as the is known to be *S* from

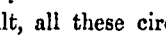
its ending the name of Ptolemaios, the value of —•— must be the same. It was by carefully noting all such examples which fell under his observation that Champollion perfected his alphabet, and for this purpose the comparison of proper names was the most useful, for it afforded certain data for the undoubted value of the phonetic hieroglyphs. The scribes by no means servilely followed a normal rule, but often seem to have substituted one phonetic hieroglyph for another; and such hieroglyphs are termed *homophones, i.e.*, having the same sound as each other. The words in the text could be accordingly introduced either by purely phonetic hieroglyphs, without any ideograph, by an ideograph alone, or by the union of the two, as—

Phonetic		suashi	supplication
Ideograph			supplication
Mixed			supplication
Phonetic		[illegible]	to fight
Ideograph			to fight
Mixed			to fight

In general texts some words occur written in the first modes others in the second or third, according to the bias or option of the scribe, but no text offers a series of purely phonetic signs. When, however, single words are inserted over figures of objects, the ideographs are often omitted, because the object or picture was itself the ideograph; for example, the names

of the following objects are written:— *kaf*, over an 'ape;' *au*, over a 'cow;' *teb*, over a 'box,' &c.

It is evident that the comparison of groups and words requires to be conducted with the greatest judgment, for a false and hasty application has conducted one student at least into a maze of absurdities. Sometimes equivalent words sounded quite differently have been employed, and in repeated instances signs of time and case suppressed in one copy are carefully inserted in another. Hence, to arrive at a correct result, all these circumstances must be carefully weighed.[1]

An examination of the structure of the Egyptian shows that it is closely allied to the Coptic, although differing in some essentials; the substantives and adjectives undergoing no internal changes of vowels when written, as is the case in that language; and if such a change anciently existed, it was expressed in speaking, not defined by writing. The plural of nouns is distinguished from the singular by the addition of *iu*, as *neter* a god, *neteriu*, gods; and in verbs the root continued unchanged throughout all moods and tenses which are formed by auxiliaries and affixed pronouns; the passive is formed by placing the addition of  *ut*, that of the past participle to the verbal root, as *mer-ut en Amon*, "beloved of Amon;" *ar-ut naf*, "he has been made," from the verbs *mer*, to love, and *ar*, to make or do. The detached or separate pronouns resemble the Hebrew, Chaldee, and other Semitic languages; but the declension of the noun and conjugation of the verb is Coptic.

It is not here necessary to enter into the literary history of the Coptic, which is the form in which the Egyptian language

[1] M. De Rougé, l'Athénæum Français, 1852.

has remained till the present day ensconced in the liturgies of the Egyptian church. It appeared about the third century, certainly not earlier, and retained its forms in three dialects—the Sahidic of the Upper Country, the Memphitic of the division of Lower Egypt, and the Bashmouric. Standing as it does, intermediate between the Semitic and Hamitic dialects, and interspersed with many words of Greek, Latin, and Arabic origin, it yet is admitted by all who have profoundly studied it to contain the remains of the colloquial language of Egypt.[1] It has been referred both to the Indo-Germanic and Semitic families.[2]

About eight hundred words have as yet been determined, of which the greater part are Coptic, as—

EGYPTIAN.	SENSE.	COPTIC.	EGYPTIAN.	SENSE.	COPTIC.
pe	the heaven	pe-phe	*stem*	eye pigment	steem
sev	a star	sion	*a*	a house	ei
iuma	the sea	iom	*seb*	the door	abe
maau	water	moui	*mer*	to love	mere
mu	a mother	mau	*mest*	to hate	mosti
at	a father	ioot	*neb*	to swim	nebi
sen	a brother	son	*am*	to eat	ouoom
uhor	a dog	ouhor	*hiu*	to strike	hi
pen	a rat	pin, phin	*ter*	entire	teer
shau	a boar	esko	*neb*	all	nibi
ter	a shoe	tooone	*men*	none	men
shenti	a shirt	shentoo	*ân*	to be	oun
mess	a girdle	mouss	*au*	was	oo

The following table will show a few of the numerous words which have great analogy to the Hebrew and Chaldee forms:—

[1] Encycl. Britan. l. c. pp. 308, 316; Quatremère, Recherches sur la Langue et la Littérature de l'Égypte, 8vo, Paris, 1808.

[2] Klaproth (J.), Lettre à M. Champollion le Jeune, 8vo, Paris, 1823. Beufey. (Th.) Ueber das Verhaltniss d. Ægyptesch. Spraete, 8vo, Lips. 1844.

EGYPTIAN.	MEANING.	HEBREW.
iama	the sea	yam
ruha	the morn	lailah
mer	the sea	mul-ah
ses	a mare	sus
sakut	a tent	sekut
khef	to take away	shabah
kha	like	ki
su	a person	aish
hutu	an order	tsivah
teb	a box	tebah

EGYPTIAN.	MEANING.	HEBREW.
suti	a devil	shed
ga	to go	tsa
rut	to germinate	ya-led
as	they	az
nahem	to rejoice	nakhem
ar	to do	âlâl
am	daylight	yom
bekham	the hippopotamus	behemoth
kaf	an ape	qof

Besides which, several words avowedly Semitic and distinct by their polysyllabic form, have been introduced into the body of the language, at the time of the nineteenth and following dynasty, as—

EGYPTIAN.	MEANING.	HEBREW.
bata	a house	*beth*
makataru	a tower	*migdol*
makarbuta	a chariot	*mirkhaveth*

EGYPTIAN.	MEANING.	HEBREW.
sara	a prince	*sar*
karunata . . .		. . .
mahuru	a warrior, lord	*mar*

Many of the words, however, resemble various others of the so-called Indo-Germanic family: several are like English, as—

EGYPTIAN.	MEANING.	ENGLISH.
shaf	a sheep	sheep
hut	white	white
ân	a chicken	hen
kau	a bull	cow
kar	to bear	carry

EGYPTIAN.	MEANING.	ENGLISH.
abut	a mansion	abode
a	one	a
ti	two	two
sas	six	six

Some of the other words might also be referred to Indo-Germanic roots in other languages, as *kaa*, a floor, like the Greek *gee* (γῆ); *sab*, cunning, or to know, like the Latin *sapere*; *neva*, sailor, like *nau-ta*; *naham*, to take, like the German *nahmen*; *ta*, thee, feminine article, like *die*, the; but these etymologies might be carried too far, and they are given more as

curiosities of literature than as serious truths. It is now necessary to turn to the grammar, in order to appreciate the power of reading the hieroglyphics. The noun, as has been already stated, does not change, except by the addition of *ui*, or *iu*, to itself in the plural. The indefinite articles are *a*, or *a*, *one*, sometimes abridged to for the masculine, and for the feminine; the definite , , or ; the genitive is formed by *en*, , of, or *em* out, of: the dative by *en*, to or for , and *er*, the *le* of the Hebrews, implying direction. The accusative is the same as the nominative: the vocative also, but with *ha*, or *a!* prefixed to it. The plural is declined in the same manner, except that the nominative plural has *han* and the genitive plural has *nu* before it—

SINGULAR.	DUAL.	PLURAL.
neter a, a god	*neter ti*, two gods	*neteriu han*, gods
en neter, of a god		*en neterin*, of gods
en neter, to a god		*en neteriu*, to gods
er neter, to a god		*er neteriu*, to gods
neter, god		*a neteriu*, O gods
a neter, O god		*a neteriu*, of gods
am neter, by a god		*am neteriu*, by gods

This is the only declension of nouns; the masculine are formed by dropping the *a*, and *han* and placing *pu* or *pe* before the noun; the feminine by placing *t* after it, or *ta* before it; adjectives have only the plural termination added to them, and *t* in the feminine form, as *nefer*, good; *neferiu*, good, plural; *nefer t*, good, feminine. They are in the syntax placed after the substantive. The pronouns are the most complex part of the

system. First, there is a set of detached pronouns, which appear in the texts by themselves, as—

anak or *nuk*, I

entuk, thou

entaf, he

entus, she

anun, we

entuten, ye

entesen, they

These in the texts suppose the verb to be understood, and represent that verb in the present tense, indicative mood, as "I" am, "thou" art, "he" is, &c.

Secondly, there are personal pronouns, placed after nouns or verbs, affixed to them—

a, I, mine,

ak, *et*, thou, thine

ef, he, his

es, she, her

enn, we, our

ten, ye, your

sen, they, their

The accusative forms of these are—

u, me

ku, thee

su, them, or him.

The possessive pronouns of the things possessed are formed by prefixing the articles to the personal pronouns, as—

paia, *puig*, my, mas.
taia, *tuia*, my, fem.
naia, our
paik, *puk*, thy, mas.
puik, thy, fem.
tait, thy, fem.
naik, thy, plural mas.
nais thy, plural fem.
paif, his
pais, her
taif, his
tais, her
naif, his, plural
nais, her, plural
pan, our, mas.
tain, our, fem.
nain, our, plural
peten, your, sing.
naiten, your, plural
paisen, theirs, mas.
taisen, their, fem.
naisen, their, plural

In these pronouns the *p* at the commencement shows that the object possessed is masculine, the *t* that it is feminine; the *f* at the end shows that the possessor is masculine, the *s* feminine.[1]

The demonstrative pronouns are—

pa, pu, the, mas.	*na*, the, plur.	*tai*, this, fem.
ta, the, fem.	*pai*, this, mas.	*nai*, this, plural

These are placed before the noun; the following come after—

pen, mas.; *ten*, fem. (this placed after the noun). *Apui* or *pui* (these plural).

The relative, who, is formed by the personal pronouns *ef, es, men, ten, sen*, &c.; beside which is *akh, kha*, who? what? interrogative; and there is a reflective pronoun, *ges*, self, placed before the personal pronouns, as—

ges-a, myself	*gess-s*, herself	*gess ten*, yourselves
gesk, thyself	*gess nen*, ourselves	*gess sen*, themselves
gesf, himself		

all of which are also placed after antecedent personal pronouns.

The next to be considered is the verb-substantive to be, often used as auxiliary. The infinitive of this is *er*, to be; the present participle *un*, am or being, *ar*, there are; the perfect *au*, was, *au, ut*, had been. The noun is also placed after *ar*, and has *pu*, as in Coptic, after it when anything is explained. This verb is extensively used throughout the texts as the sign of certain tenses. The verbal root, as has already been remarked, undergoes no change; and the tenses are formed by placing certain words,

[1] For the Grammar, see Champollion, Grammaire Égyptienne, folio, Paris, 1837; Bunsen, Egypt's Place, p. 344.

called auxiliaries, before the verb; the persons of the tenses again made by changing the pronouns placed after the verb. This system resembles the Semitic and that of the Indo-Germanic mode of conjugating verbs. There is but one conjugation; and although it would be difficult to find all the tenses of one verb, yet by comparison it is easy to restore the paradigm of a verb; as *gu*, to speak; *gu-a*, I speak, present indicative; *ha-en-a gu-a*, I was speaking; *au a gu-na*, I have spoken, first aorist; *gu-na*, I spoke; *au-a gu-a*, I will speak, first future; *gu-na*, I will speak, second future; *au-a-er gu*, I will speak; *au-a her-gu-a*, I was about to speak; *gu k*, say thou, or *gu er k*, speak thou; *mai gu a*, present optative, may I speak, or let me speak; *er gu*, to speak; *gu-a*, speaking, active participle; *enti gu*, speaking; *gu-ta*, speaking; *gu ut* spoken; *gu-i*, spoken. A kind of middle voice is formed by adding *ku*, the reflective pronoun to the verb; as *gu ku* I myself said. The passive is formed by affixing *ut* to the verbal root throughout; as *gu-ut a*, I am spoken or declared; *gu-ut na*, I have been declared or spoken. A verbal form is also produced by placing *s* before a noun; as *gu*, a word; *s-gu*, to declare.

Speak.

I speak. Pres. Indicative.

I was speaking. Imp. Indic.

I have spoken. 1st. Aorist.

I spoke. Perfect Indicative.

I will speak. 1st. Future Ind.

I shall speak. 2nd. Future Indic.

I was on the point of speaking. 2nd Aorist.

or .....

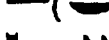
Speak thou. Imperative.

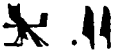
Speak. Imperative.

I may speak. Pres. Optative.

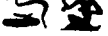
That I may speak. Pres. Subjunctive.

To speak. Infinitive.

 Speaking. Pres. Participle.

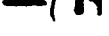
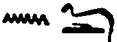
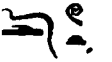
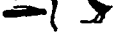
 Speaking.

Spoken. Past Participle.

 To make to speak.

I myself speak. Pres. Ind. Reflective or Middle.

I am declared. Pres. Indicative Passive.

The prepositions are  *an*, of, by, from, or to; *am*, by, belonging to, in, from, as;  *er*, to, towards; *api*, upon;  *her*, upon, in, out of, above; *shar*, towards; *kar*, under, beneath; *kha*, according to, like; 

hna, with, together with; or *ma*, in place of, instead. Several prepositions are compounded of the head *ga*; as *ha-ga*, before, of *her*, the face; as *an her*, in front; *her her*, above, besides; *her ga*, a-top, over; *her het*, within; *her sa*, behind: another form is *am tu*, before. Others have the fore-part of a lion: as *am ha*, in front; *er ha*, to the front; *kar ha*, under the front: or the hinder parts—*peh*; as *kar peh*, behind: or a hole, as *er ma*, instead: or a headless animal: *em khen*, within: or a mummy, as *em alu*, in turn. These prepositions are placed before the cases they govern.

TABLE OF PREPOSITIONS.

en, to, from, by, out of.

enka, to.

em, in, out of, for, as, among.

er, to, towards, for.

her, upon, in order to, out of.

her ga, above, upon.

en her, before, facing.

kheft, facing.

api, upon.

hel, within.

kar, beneath, under.

hna, together, with, by.

her.....

er her, together, with, towards.

kher, to, at.

kher, to.

am, to, in.

em tu, before.

em khen, within.

em ha, before.

er ha, before.

kar ha, before.

kar peh, behind.

em sa, behind.

.....

.....

em alu, in sight of.

em teb, instead.

ma, in place of.

erma, at.

ha, before.

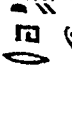
ensu, after.

ensa, about.

These are accompanied by Nouns and the affix Pronouns.

The adverbs are formed upon the same plan, and many of them are, of course, prepositions in the abstract—as *am ha*, before; *kar ha*, formerly. Some of the others are, *as* or *as-tu*, when; *ter*, when, since; *shef-t*, since, when; *heh*, *er-heh*, *er-neheh*, *en neheh*, for ever; *get*, eternal; *shar get*, for ever; *kha enti*, exactly; *er enti*, touching; *am-nu*, as aforesaid; *muhut*, like; *kar*, then, only; *sher*, for, because; *er-ter*, entirely. Any adjective could also become an adverb, by placing it after an adjective; as *hur naa*, very great. The negatives are, *men*, *bu* or *ben*, *ati*, *tum*, not; the interjections *a! hai!* oh! ha! *aneg!* hail! There are but few conjunctions; but *ter* and *kar* answer to the Latin *tum* and *quum; her enti*, because; *ter enti*, therefore; *hna* and *masht*, after, or, &c.

TABLE OF ADVERBS.

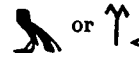

as-t, then.

kheft, when.

her a, directly.

her enti, because.

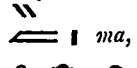
hne, besides.

 *em hru,* besides.

sep, times; as, once, twice, &c.

twice.

ma, where.

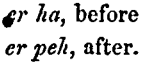
 *her,* on high.

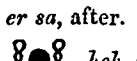
er ha, before: see adverbs.

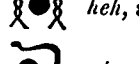
er peh, after.

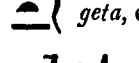
er sa, after.

heh, always.

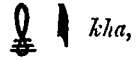
 *geta,* ever.

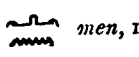
 *shaa,* until.

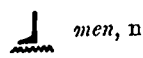
 *kha,* like, as.

 *men,* no, not.

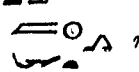
men, no, not.

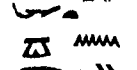
 *men, bu,* no, not.

 *masht,* after.

 *kar enti,* therefore.

er enti, concerning.

 *kha enti,* as to.

 *ter,* while, when, as.

ter enti, therefore.

kar, so, only. Placed after the verb.

CONJUNCTIONS.

hna, with, and.

[?] *ha*, and.

her, and.

her, and.

er her, and.

ker, then, as.

ki, also.

INTERJECTIONS.

A, oh!

Hai, ah!

Aneg, hail!

The syntax is also remarkably regular, as much so as the English and Chinese, and on the same principle, the ideographic nature of the symbols allowing the language to be often written without the connecting particles of the grammar and position alone determines its meaning. When two substantives come together, the second is in the genitive, as *sa ra*, son of the sun, for *sa-en-ra*, son of the sun; the adjective is always after the noun which it qualifies; as *bak nub*, a golden

hawk, or a hawk of gold; *erpa ha*, chief duke, arch-duke; but when two adjectives come together, the second becomes adverbial, as *ur-naa*, very great. The nominative case follows the verb directly as, *gu-nuteru*, say the gods; and all dependents on the nominative follow it; then the case governed by the verb, as *men satem sen gu*, not hear they the words; but the dative comes next to the verb, and then the accusative, as *ma-na-nuk-necht*, given have I to thee a power, and the vocative after that, as *kep nak khepsh nekht su a*, received hast thou the scimetar, O my son! the same as in English. The instrumental or ablative, last of all, as *men ar a er f am aaui a*, not do I touch him with my arms. The prepositions are placed before the nouns and substantives they govern, as *ai na shar ek am shes ek*, we come to thee on thy services (*i.e.* as thy servant). The adverbs are placed after the auxiliary verb—*au kar ar na seka*, I was then created a scribe; but they always precede other verbs and substantives, as *shaft men a er sen*, when he approaches them; the interjections precede, as *a neteru naau*, oh, great gods! Such are the general laws of syntax.

The composition is in short sentences of a very regular nature, resembling those of the early Hebrew books, and by no means involved like the more elaborate writing of the west. Most of the grammatical forms, indeed, occur in the various kinds of writing, but the sentences are chiefly replete with metaphor and antithesis, especially those which describe scenes of historical purport. The idea, as in Hebrew poetry, is broken in two, the second member of the sentence re-echoing in a modified form the same idea. Thus, in the historical legends at Beitoually,[1] it is said to Rameses II. by his chiefs:—

> "The Sharu (Syrians) are under thy sandals,
> Kush (Ethiopia) is in thy fist."

[1] Rosellini, M. R. lxiv.

The same monarch is also described as—

"A lion against the Sharu (Syrians),
A strong bull against Kush (Æthiopia)."

This is still more forcibly shown in the titles of the king for the same is called—

"O perfect God, very terrible,
The strong lion; mighty lord,
The strangler of hostile lands.
Fallen are the Tahennu (Europeans) to thy blade,
Killed lie the Phut (Asiatics) under thy sandals!
Immortal as the sun!"

This is, in fact, the official style; for tablets commence with a long series of titles, as "The year twenty-eight under the reign of his Majesty the living Sun, the strong bull, beloved of truth, lord of festivals of thirty years like Phtha, lord of diadems, watcher of Egypt, chastiser of foreigners, the Sun born of the Gods, possessing the earth, the golden hawk, defender of years, greatest of the powerful, the King of the upper and lower country, lord of the earth, lord of creation, the Sun, defender of truth, approved of the Sun, son of the Sun of his body, beloved of him, lord of diadems, taker of the upper crown, RAMESSU, may he live for ever on the throne of Horus." Such is the preamble of a stele or tablet at Ibsamboul, all of which only means "the twenty-eighth year of Rameses II." The strong bull means that he is a valiant hero; the festival of thirty years, that after that time he had the right of celebrating a jubilee, because he had lived an *aion*, or age; the golden hawk implies that he is the Sun, or the first principle, known as a hawk; the throne of Horus, the Egyptian throne always occupied by a *Pharaoh*, the living Sun or god Horus.[1]

[1] Champollion, Notice, 78.

Subject-matter, indeed, is not so periphrastic, as the remainder of the inscriptions continue in a more level strain; still it requires that the mind of the reader should habitually become trained to the idiom, or orientalised, before he can appreciate the beauties or comprehend the force of the writing. The style is often filled with certain similes of constant recurrence; thus, speaking of the king, it will say, he puts on the armour of Mentu or Mars, or that his hand is firm on his chariot like that god; he comes out of the egg, or the primæval matter of the sun; he dissipates his enemies like chaff before the wind, strikes them down under his sandals, goes down in the valleys like a child amidst grasshoppers, lets not one of them escape, or makes them as if they were not, covers his army with his wings like a hawk on the day of battle, has no equal or second, is in the shape of Ammon (Jupiter), or Mentu (Mars), hoes or ploughs or squeezes hostile countries, takes the breath out of their nostrils, bruises or stabs the Barbarians. This high style is exchanged for a pure and simple one, when descriptions are required—for example, the following is the account of the beating of two foreigners before the Pavilion of Rameses II., in the campaign against the Khita, represented at the Memnonium.[1] [This is] "The approach made by the scouts to his Majesty's tent. They have brought two spies of the Khita before his Majesty, they have beaten them to make them declare what is going on in the land of the Khita." (Hittites.) Although the whole literature was essentially sacerdotal, being composed and written by priests or scribes, yet there are of course several varieties of style. Prayers are of great simplicity, by no means inflated with the bombast of royal flattery. The following, for example, is a short prayer to the rising sun, part of which is entitled, "The Adoration to

[1] Rosellini, M. C. cii.

the Sun, lord of the two horizons, who gleams from the eastern horizon of heaven." [1] The deceased thus addresses the god:

"O Sun, lord of sunbeams, shine on the face of the deceased, who is adored at the sunrise, who is welcomed at dawn, whose soul goes with thee to the heaven, who proceeds in the cabin, and floats in the ark, who moves as the incessant stars of heaven; he says, glorifying the eternal lord, Hail to thee, O Sun, lord of the horizon, creator self-created, beautiful are thy beams in the horizon, lighting the world with thy rays; all the gods with joy behold the king of heaven, the mistress of the hour is placed on thy head, the upper and lower crown is on thy brow," &c. This style, of course, contains many allusions to ideas which had a deeply theological or *esoteric* meaning, for wisdom was couched at this time in allegories, like the enigmatic course of instruction of Pythagoras. In most of the compositions, dialogue is introduced: thus in the scenes of triumph, the gods speak to the king, and the monarch replies to the gods, but no continuous dialogue, that is, of successive speeches, has been found, although in the Ritual questions and answers are effectively introduced. In dialogues of the historical scenes the language is often a transcription of the vernacular, differing from the ordinary formula by the copious introduction of pronouns, which must have been used in speech, although suppressed or written shortly in the religious texts. Good examples of this style will be seen, both on the walls and in scenes, which explain the great campaign of Rameses II.,[2] against the Khita or Hittites, especially where the monarch discourses with his officers, and in the papyrus containing a full account of the campaign. The epistolary style is also level and

[1] Lepsius, Todt, taf. iv. c. 15, l. 1-3. [2] Rosellini, M. R. lxvi.

unimpassioned, not so loaded with similes, or full of bombastic terms of expression; it is written in the vernacular. "You tell me in the letter about my son, he is going to the Kharu, I am about to return him to the fortress, keeping watch to guard it for Egypt, for six years," which is as simple as could be written now: similarly explicit are the directions of calendars and such like — for example,[1] the calendar of the reign of Menepthah directs thus:

"Fifth of Paophi, bad at morning, noon, and night; do not go out anywhere on that day, speak to no one on that day, (for) it is the day when the names were called out before Sebak (Saturn) and Mentu (Mars); any one born on that day dies killed by a bull."

Having dispatched the sober part of prose, it is now necessary to consider the gayer tone of poetry, of which a few fragments are preserved, and which was metrical, but not ending in the same syllables at the end of the verses, except in certain refrains. One of the oldest metrical pieces is the song of the thrashers to the oxen, who tread out the corn. This, transcribed, reads:—

hi těn ēn těn	Thrash ye for yourselves
hi těn ēn tēn ăāā	thrash ye for yourselves, O oxen,
hī těn ēn těn	thrash ye for yourselves
hi těn ēn těn	thrash ye for yourselves
těhā ĕr ămū	the straw which is yours
khăă ĕn nĕbŭ těn.[2]	the corn which is your master's.

Here verses of four and six syllables are used. There are other parts of this song thus sung by the men engaged in the operations; but the lines are not so distinctly marked. Besides which, there were words set to instrumental music, not merely vocal. A song is given by Rosellini, unfortunately badly copied, and not intelligible.[3]

[1] Select Papyri, cvii. Rev. D. T. Heath. Exod. Pap. p. 140.

[2] Rosellini, M. C. xxiii.

[3] Rosellini, xcvi. 5.

As a specimen of the epic, or heroic verse, may be cited part of a poem[1] containing the praises of Rameses II. :—

Ha sgu nekhtu en	The commencement of declaring the power
pa neb en Kam	of the lord of Egypt.
katen naf kher of uga ua bakhen	His Majesty built a tower
naa nekht van ef	greatest of victors is its name
su er shua Taha er a Merter	it holds Taha for Egypt
meht ani kar gefu	stored with fresh provisions
su kha skhar Annu rasu	it is like a picture of South Anu
ha f kha ... Ptah kar	its time is like that of Phtahkar (Memphis)
uben pa nu em khut	the sunlight beams in its horizon
kept am khennu f	and sets within it
kha bu neb nasen tashu	all places leave their fortresses
kar am nui f	torn from their (or to its) confines
ement ef am a an amen	its west (left hand) is as the temple of Ammon
abt ef am a sut	its east (right hand) like that of Sut (Typhon)
kheperu Astarute am paif uben	Astarte is born in the midst of its light
sati em paif meht	Sati is in its fulness.
pa bakhen enti em khennu f	The tower which was within it
Sa kha khu en pe. t.	was like the horizon of Heaven.
Ramessumeri'en Amen pef neter.	Rameses beloved of Amon is its god
mentu em tau em shemu	a Mentu (Mars) in the countries as he walks,
Ra en hekw em ai	a Sun of rulers in his carriage.
notem en kami	The delight of Egypt
meri en tumm em ha.	beloved of Tum from the first !

The following is the specimen of a panegyrical Ode :[2]

" Amon delights thy heart ;
he gives thee great honor ;
a delightful time has been made to follow thee ;
thy life is blessed, thy arm is well ;
thy eye is clear to perceive,
thy dress is plaited ;
thou leadest the horses of thy chariot of gold in thy hand ;
thou placest . . . thy yoke . . .
the Kharu and the Nahsi are dragged before thee,
when thou makest thy appearance ;

---

[1] Select Papyri, Pl. lxiii. cf. lxxxvii. Rev. J.D. Heath, Exodus Papyri, p. 21.

[2] Rev. D. T. Heath, Exodus Papyri, pp. 198, 199. Select Papyri, Pl. lxxiv. 3.

thou hast gone to thy boat of cedar,
carved before and behind;
thou approachest the good inner palace which thou thyself hast made;
thy mouth is filled with wine and beer,
with bread, meat, and the flesh of slaughtered bulls;
The wine is opened, the strain is delightful before thee;
thy anointer anoints thee with cassia;
the chief of the irrigation brings purslain [or chaplets],
the chief of thy fields presents birds,
thy fisherman brings thee fish;
thy galley goes in the land of the Kharu,
laden with all good things;
thy stalls are filled with cattle;
thy female slaves are fruitful (?);
thou hast placed thy accusers prostrate at thy words: 'it is not so!'
thou hast gone into the presence of the daimons,
thou hast come forth justified."

As another specimen of the religious poetry, may be taken, the first stanza of a hymn to the Nile, in a papyrus,[1] now in the British Museum:—

Sha en Hapi	A hymn to the Nile
nether ek Hapi	incline thy face, O Nile
shem em ta an'	coming safe out of the land
or sankhu kam	vivifying Egypt
amen sam kek em hru	hiding his dark sources from the light
hes nu sem	ordering his sources
au shau ammeh	the streams of his bed
kam am Ra	are made by the Sun
er sankh hu abu neb	to give life to all animals
s'hur set bu tem	to water the lands which are destitute
nau pe haa	coming all along the heaven
mer en tufa kherp nefra	loving fragrance, offering grain
s'hut teba en Phah	rendering verdant every sacred place of Phtha!

The literature is comprised in two great classes, monumental, the work of the sculptor; scriptural, that of the scribe. In no country in the world were monumental inscriptions

[1] Select Papyri, Pl. xx. and cxxxiv.

so profusely employed; for whole temples are literally books, the walls of which are the leaves covered with hieroglyphs, to which the sculptures served only as vignettes, or illuminations. These consist of dedications, colloquies of gods and kings, prayers, calendars, lists of offerings, and historical archives, containing records of important public events. The tombs of the dead are also elaborately painted or sculptured throughout with hieroglyphs, containing, at the earliest period of the fourth dynasty, the names and titles of the dead, and certain religious formulæ, which all who beheld were expected to repeat, being thanks to the gods because they had given the blessing of life or a due funeral to the deceased, long lists of offerings and of festivals, in very elliptical style, which continued till the time of the eleventh dynasty, when certain extracts of formulæ begin to appear.[1]

In the paintings, too, of the sculptures, single words and short sentences are dispersed over the figures and in the area; as *us-t*, "the sawing,"[2] over men sawing; *shen*, "chiselling,"[3] over men using the chisel; *sek an ben*, "scraper on the harp,"[4] over a harper. These commencing at the fifth are continued during the subsequent dynasties; and the same principle of naming the various objects occurs on the temples and other public monuments. A few tombs have long inscriptions, recording the appointments and exploits of functionaries, military and civil. Such are, however, rare; and the greater part of the sepulchral formulæ are religious extracts from the liturgies recited in honour of the dead, which at a later period had become incorporated with one of the Hermetic books, now generally known as the Book of the Dead, or Ritual, which will be subsequently described. There is one of these

[1] Lepsius, Denkmäler, Abth. ii. 115. [2] Ibid., Abth. ii. Bl. 9.
[3] Ibid. 49. [4] Ibid., Abth. 53.

formulæ, repeated with more or less modifications, on all objects of the dead, which is a kind of *orate pro anima* of the deceased. "Peace be," it says, to certain gods, such as Osiris or Anubis, "who have given meals of food and drink, wine, milk, water, oxen, geese, vegetables; the gifts of heaven; things created on earth; brought by the Nile; to drink the water of the river; to eat the food of their table; to inhale the delightful breath of the north wind, or the fragrance of incense; to go in and out of Hades, the light of heaven, the support of earth, the justification of Hades to the deceased." This prayer is often preceded by an injunction to all men to say it, as—"O all ye who live on earth, all priests, prophets, scribes, undertakers, as ye obey your chief, transmit your glories to your children, wish them to remain in your place, as ye love life and fear death, whether going or returning by this tablet or statue, do not fail to say it."

It is impossible to give an account of all the inscriptions: some of the most important are the services of Aahmes-Pennehen at the beginning of the eighteenth dynasty; the Ethiopian inscription recording the wars against the Hykshos; the tablet of Karnak, containing the annals of Thothmes III.; the treaty between Rameses II. and the Khita; the records of making tanks or wells for miners at the gold washings; the record of the star risings in the tomb of Rameses V.; the account of the journey of the ark of the god Khons to the land of Bakhtan in the reign of one of the later Rameses; the Egyptian version of the conduct of Cambyses, and his successor Darius Hystaspes towards Egypt. The style of these inscriptions has been already pointed out.

Of the scriptural hieroglyphical texts, the principal is the Ritual of the Dead, a work containing a very curious and interesting portion of the Hermetic Books. It appears that, at

least as early as the twelfth dynasty, a collection had been made of certain religious formulæ, consisting of prayers and formulæ ordered to be said by the priest or inscribed upon the coffin and amulets deposited with the dead. These had subsequently assumed the form of a distinct literary composition, and at the time of the later monarchs of the country, transcribed with all the various readings and different chapters which had come into use, and formed a work which, more or less complete, and written in hieroglyphics or hieratic, on papyrus, linen, or leather, was rolled up into a cylindrical form and deposited near or about the dead, often on the mummy, or else in cases of wood in the shape of Osiris, as lord of the west, or judge of the future state. The Rituals are divisible into two distinct classes, which are never confounded nor appear together. The first is the Litany of the Sun, representing the passages of that god through one of the hours of the day, accompanied with an explanatory text, generally found deposited with mummied priestesses of the god Amon at Thebes. The others, which contain the true funeral ceremonies, are more common, and exist in great numbers from the time of the fourth dynasty to that of the Roman subjugation, when a few abridged isolated chapters were used instead of the old theological formulæ. This work is accompanied throughout by vignettes, one to each chapter, elaborately painted like those of missals, and the leading words of the chapters and direction pages are written in red like the rubrics of prayer-books.[1] So important is this work to the study of hieroglyphs, that a short epitome of its contents cannot fail to interest the reader. The fullest copy known of this book is the papyrus of the Museum of Turin, consisting of 165 chapters.

[1] These rituals have throughout blank spaces in which the name of the deceased was inserted. They were rapidly copied, and are full of blunders.

Part I. comprises sixteen chapters, probably the prayers recited by the priests during the performing of the funeral, or escorting the mummy to its tomb—consisting of prayers to the Sun and other gods, to ensure him a favourable reception in the future state. Thus one part states—"Let this chapter be read on earth, it should be painted on the coffin; he will come out any day he likes and go to his place without being turned away; there is given to him bread and drink, and slices of flesh off the table of the Sun, when he peregrinates the fields of the blest, corn and barley are given to him, for he is as provided as he was upon earth."[1] The vignettes of this section represent funeral ceremonies.

II. Contains the portion requisite to be known in order to let the blessed out of the Hades, to enter the service of Osiris, and to enable him to make the requisite transformation or transmigration. This remarkable part contains a number of singular mystic interpretations, which the deceased had to answer when asked—a kind of theological examination of his knowledge and faith.[2]

III. The eleven litanies of Thoth or Mercury, calling upon that god to make good the words of the deceased against accusers before the gods of as many regions—this was called "the Crown of Truth."[3]

IV. Certain chapters enabling the deceased to receive his mouth and heart, or to prevent them being taken away by the demons or accusers.[4]

V. A series of chapters enabling the deceased to turn back, or stop the serpent, tortoise, and crocodiles, called the eater of the ass and gnawer of the back bone, which come to devour him.[5]

[1] Lepsius, Todt. ii. 1, 22-3. [2] Ibid. vii. 17. [3] Ibid. vii. xiv. 18-20.
[4] Ibid., Todt. xiv. xv. 21-30. [5] Ibid. xv. 31, 41.

VI. A section in which the deceased has given to him the appearance of several deities, in order to avoid being wounded in the infernal strife.[1] His hair is that of the milky way; his face, that of the sun; his eyes, the symbolical eyes of Athor; his ears, those of the jackal-headed god Anubis; his fingers and toes, live serpents, &c.

VII. A section containing chapters by which he is enabled to escape having his head cut off for his sins, or disappearing, being soiled, or wasting away, others for obtaining his proper place appearing against his accusers, of avoiding going to the block, or to be overthrown, eating or drinking impurities, breathing, and being strengthened by drinking waters of heaven,[2] and refreshment of the dead.[3]

VIII. Chapters referring to coming out from daylight, or life passing through the portals of the gate to arrive at the Sun.[4] One of these chapters is said to have been discovered in the time of King Mycerinus, by a prince named Hartetef, written upon bricks of earth painted in blue, placed under the feet of the god Thoth.

IX. The transformations made by the deceased, who changes himself into the goose, the hawk of gold, the divine hawk, into the chief of the gods, into a lily, Phtha, or Vulcan, the nycticorax and another heron; he also assumes the form of a soul, of a swallow, of the serpent, the soul of the world, of the god Sebak, to obtain Isis heart.[5]

X. In the tenth section are several chapters on the union of the soul to the body; the reception of the writing from Thoth,[6] of finding the soul again, going to the east, receiving writing materials and speech of Thoth; ascending the boat of the Egyptian Charon, all of whose parts call on the deceased to

[1] Lepsius, Todt. xvi. xix. 42.
[2] Ibid. xxi. xxiii. 41-53.
[3] Ibid. xxi. xxiii. 52-63.
[4] Ibid. xxiii. xxviii. 64-75.
[5] Ibid. xxxiii. 76-88.
[6] Ibid. xxxiii.-xxxviii. 89-106.

tell them their mystical names; the passage in the barge of the sun; the chapter of finding Athor, of sitting with the gods.

XII. Certain chapters of going in and coming out of the gate of the west, and of knowing the spirits of the east and west of Eshmûn, or *Hermopolis*, and Annu, or *Heliopolis*. The going in peace to the fields of Aahlu or *Elysium*, ploughing, sowing, reaping, and transporting the food there made.[1]

XIII. The chapters of going in and out of the Rusta or plains.[2]

XIV. The Book of the arrival at the Hall of the two Truths, and the final judgment before Osiris, and the denial of the forty-two sins to their personifications and demons, and the weighing of the heart, the record of Thoth.[3]

XV. The parts of the Hall here call on the deceased to tell them their mystic names, or they will not let him proceed.[4]

XVI. The basin of purgatorial fire guarded by four apes.[5]

XVII. A book called that of adoring the gods of the sun's orbit; another instructing the dead to stand at the boat of the sun; another for the same purport, and giving eternal life to the soul, containing chapters relating to the going out to the heaven as the soul approached the gate of Hades; others containing adoration to the Sun; of going to the east; adoring the god Tum, or the setting sun.[6] There is here a book said to be made on the 30th of the month Epiphi when the Eye is full. Another separate book or section is that teaching the dead the names of the gods of the south and north; and a second book telling them the names of certain other gods.[7]

XVIII. Contains the account of the Halls of the *Aahru* or *Aahlu* (Elysium). There are seven halls of the meek-hearted Osiris, of which it is necessary that the deceased should know the names of the keepers, and the name written over them, and

[1] Lepsius, Todt. xxxviii. xlv. 107-16. [2] Ibid. xlv. xlvi. 117-24.
[3] Ibid. xli. l. 125. [4] Ibid. li. 125. [5] Ibid. li. 126.
[6] Ibid. li. lviii. 127-139. [7] Ibid. 140 143.

twenty-one gateways; into each of these he is compelled to enter anointed with a particular oil, clad in a particular dress, and holding a wand or stick of particular wood. He announces to the god that he knows their names; the demons then tell him he may go forth.[1] This is followed by a book entitled that of "Instructing the dead who is the delight of the Sun," and is spoken of in the following terms: "Nowhere is there a book like it; men have not spoken it, nor eye perceived it, nor ear heard it.[2] Nothing prevails against him." This mystical book refers to seven cows and a bull, four mystical eyes, and a certain embalming of Osiris. The twenty abodes. These abodes are as many regions of the *Kar-Neter*, or Hell, and one (the twentieth) is like the Greek Phlegethon; for it is said that none of the dead can endure it, the waters being of flame and waves of fire of the most intense and unconquerable heat, while the thirst of the dead in it is unquenchable, and they have no peace in it, because it is filled with weeds and filth.[3]

XIX. These are followed by some intermediate chapters, relating to the embalming.[4]

XX. Those of the six amulets or talismans placed on the necks of the dead,[5] in order to insure him certain benefits.

XXI. Thoth, opening the doors of the four winds. This is followed by a chapter entitled that of producing warmth under the head of the deceased; it is particularly here prescribed that no evil eye should be allowed to see it, and with this part the Ritual ends;[6] but there are two additional chapters, generally found at a later period, containing the mystical names of Ammon in the language of Nubia.[7] This mystical book

[1] Lepsius, Todt. lx. lxviii. 144-47. [2] Ibid. lxix. l. 6.
[3] Ibid. lxxiii. 149, n. [4] Ibid. lxxiii. lxxiv. 151-54.
[5] Ibid. lxxv. lxxvi. 155-60. [6] Ibid. lxxiv. 161, 162.
[7] Ibid. lxxviii. lxxix. 163-5. For an account of the Ritual, cf. M. Lepsius, Todtenbuch, 4to, Leipzig, 1842; Champollion, Notice du Musée Charles X.

embraces a considerable part of the theology, and chapters of it are found on coffins, the walls of tombs, tablets, and various other objects of the dead.

HIERATIC WRITING.

The hieratic characters stand in the same relation to the Egyptian hieroglyphs as our writing to printed text, the various hieroglyphs employed being more or less reduced in form and often much altered in shape. There are fewer abbreviations used in the hieratic writing than in the hieroglyphic, and the number of characters is smaller, the same one often corresponding to two or three hieroglyphs. For these reasons the study of the hieratic is very important to a due knowledge of the structure of the language, while the rolls hitherto discovered written in it are of considerable literary interest. It is as old as the fifth dynasty, and ends about the period of the Antonines.

In all the transactions of ordinary life it was extensively employed. In it correspondence was carried on; accounts rendered and annals kept; memoranda, rituals, and probably all drafts of inscriptions made. It was rarely used for the same purposes as the lapidary inscriptions, although one tablet has an incised hieratic inscription containing a public act of the eleventh year of the reign of Amenophis III. Sometimes dedications were inscribed in hieratic, as that of the first year of Rameses II. at Gebel Selseleh, recording the quarrying for the palaces of the king.[1] It often occurs on slices of stone, on boards prepared with stucco, or sherds of vases.

144, 12mo, Paris, 1827; M. Brugsch, Aegyptischen Denkmäler d. K. Museums, s. 54, 12mo, Berlin, 1850; Dr. Hincks's loc. cit.; Rapport de M. le Vicomte de Rougé, Moniteur, Mars, 1851.

[1] Champollion, Notice, 255-6.

The papyri inscribed in the hieratic character are the prototypes of those of Herculaneum and Pompeii, and of the Greek MSS. of the Ptolemies; the originals of our volumina, rolls or volumes, like the leather-rolls of the Jews. Their script is in horizontal lines from nine to eleven in each page, reading as usual from left to right. The commencement of sections, and some of the more important words, are written in red ink, and the ends of the lines of poems are indicated by red stops or dots placed above the line; corrections, also, are made in ink of the same colour. There are no notes in our sense of the word; sometimes, however, leading words selected from the text, or even drawings of animals, such as lions and horses mentioned in it, are placed on the broad margin above the page, answering to our lemmata. Although in general these papyri are only written upon one side, yet some have their subject-matter occasionally continued on the back; others have endorsements, the titles of their subjects, miscellaneous notices, dates, &c. One of them, a most interesting fragment, apparently an ancient letter addressed from a scribe or secretary of the treasury to an officer of state, which formerly was in the shape of a cylindrical roll, is endorsed with the name of the person to whom it is addressed and the date of its delivery. It is probable that many of these rolls of papyri formerly deposited in the archives of the temples of Ammon at Thebes, were a collection of state papers belonging to the treasury, and even part of the celebrated library of Osymandyas.

The greater part of the hieratic papyri are rituals or books of the dead, the contents of which have been described; some of the religious books however exist in it, as the Lamentations[1] of Isis, a hymn in honour of the Nile, probably one of those already mentioned by the Roman writers.[2]

[1] M. Brugsch, Sai am Sinsin, 4to, Berlin, 1841. [2] Select Papyri, Pl. 20, 23

Many works however of historical interest are found, the so-called hieratical canon or book of kings at Turin, containing chronology of the kingdom till the twelfth dynasty, unfortunately much mutilated,[1] a panegyric on Amenemha I., written by his son Neberter,[2] a code of moral instructions, in which are mentioned the names of the old monarchs, Seneferu and Ani, or An, written by one Ptah-hetp in the reign of the king Assa or Asseth.[3]

The following is the subject of the principal published papyri in this kind of writing. A series of communications relating to certain transactions in Egypt, in the reign of Apepi, as a shepherd king, and Tanaaken, a king of the seventeenth dynasty, relative to a political and religious controversy.[4] A collection of letters, addressed by the scribe Pentihurtu to Amenemant, chief keeper of the records of the royal treasury, relating to the malpractices of an administrator of the crown lands, and a record of the criminal proceedings against him, apparently during the reigns of Rameses II. and Menephtha.[5]

The campaign of Rameses II. against the Khita, written in metrical style, and addressed to Amenemant, in the tenth year of Rameses II.[6] There is also another, called the announcement of the might of the Lord of Egypt, when his Majesty built a tower. The greater part, however, is of an official character,

[1] Lepsius, Auswahl, Taf. iii. vi. Sir G. Wilkinson, Hieratic Papyrus of Kings at Turin, 51.

[2] Select Papyri, Pl. 10, 12.

[3] M. Prisse, Facsimile d'un Papyrus Égyptien, fo. Paris, 1847.

[4] Select Papyri, Pl. 1, 3 ; Dr. Hincks, Brit. Arch. Assoc. Winchester Meeting, p. 246.

[5] Rev. D. J. Heath, Exodus Papyri, 8vo, Lond., 1855, p. 95 ; M. de Rouge, l'Athenæum Français, 1854, p. 552.

[6] Salvolini, Campagne de Rhamsès le Grand, 8vo, Paris, 1835, Pl. 35, 62.

and resembles the rolls on which documents were entered in the middle ages, a great portion of them consisting of various entries, many of great interest, and referring to the external politics of Egypt, consisting of correspondence between scribes attached to the finance and other branches of the administration, relating to repairs, examination of government works, reports on transports of tablets, plaints lodged against maladministration, encomiums of the monarch, orders to prepare a great feast, relation of foreign embassies;[1] certain correspondence relating to the governor of the fort of Tuk;[2] others relating to the fortress of Teben,[3] and other political affairs,[4] addressed by a certain scribe named Rameses, and an interesting calendar with astrological directions[5] what to do and avoid. There are also several invocations to gods, registers of substances, medical receipts, astronomical calculations;[6] and a kind of romance about the adventures of two brothers, showing that even works of imagination were extant in Pharaonic time.[7]

[1] Cf. Select Papyri, Parts ii. and iii. Pl. 35, 145; Dr. Hincks, Brit. Arch. Assoc., Winchester Meeting, p. 246 and foll.; Rev. J. D. Heath, Exodus Papyri, l. c.; Leeman's Mon. Egypt, fo. Leide, Pl. 155, 156; Salvolini, Campagne de Rhamsès, l. c.

[2] Ibid. Pl. 119, 122.

[3] Ibid. Pl. 122, 127.

[4] Ibid. Pl. 140, 141.

[5] Ibid. Pl. 145, ad finem.

[6] See objects, Brit. Mus. Eg. room, No. 6293. Several Papyri not published, are noticed also in Champollion, Lettre à M. le Duc de Blacas, 8vo, Par. 1824-26.

[7] M. de Rougé, Rev. Arch. ix. 385.

DEMOTIC WRITING.

SOME description of this kind of writing, called by the Egyptians *skhai en shai*, "the writing of books" or "letters," has been already given in the preceding portions, relating to the discovery of the mode of deciphering the hieroglyphs. It is distinguished from the hieratic by the simpler form of the characters, and the use of the colloquial dialect of the period, called by Manetho the "common" or "vulgar dialect," the older having become the "sacred language." Along with these, however, are introduced other groups, direct copies from the hieratic, such as the words king, eternal, &c., which are easily detected in the texts. Besides these the demotic also retains the use of determinatives, which are used in the same manner as in the other texts, being placed after the phonetic groups, and often introduces ideographs into the inscriptions, although even more sparingly than in hieratic. Throughout this writing, however, the use of the phonetic characters predominates over that of the ideographs, and the script assume a more regular, and consequently more convenient form. The language too exhibits considerable difference in construction as the various pronouns are prefixed to the words to which they relate, and demotic writing consequently represents the later spoken language of Egypt. It must not, however, be imagined that even this form of writing is pure Coptic, as the language still retains many words of ancient Egyptian origin, and their meaning has to be eliminated by the same processes. It appears that the demotic was introduced into Egypt about the time of the Psammetici, B. C. 664,

contracts dated in the reign of these monarchs being known, and this form certainly continued till the reign of the Antonines, A. D. 250, and even partially down to the third century A. D., when it was finally superseded by the Coptic; during this time it had superseded the hieratic only for *civic* documents, since, for all *sacred* purposes, the hieroglyphs or hieratic, and for all *monumental* ones of primary importance, the hieroglyphs continued in use.

The contents of the demotic monuments are unfortunately less known than either those of the hieratic or hieroglyphic. They have been divided into eight classes. 1. Public monuments upon stone, of which the most important are the inscription of the Rosetta stone,[1] that of Philæ, and the bilingual tablet of Turin.[2] These are comparatively rare, few public monuments occurring in this writing. 2. Dedications, of which the most remarkable are the inscriptions of the Tourah quarries, those found addressed to the Apis in the Serapeum at Memphis and others discovered on the Cosseir Road, and in Nubia some of private individuals.[3] 3. Contracts written upon papyrus with a reed, for the sale of the revenues attached to the tombs or of the lands and other properties. These documents commence as early as the Psammetici, continuing, through the Persians till the reign of the Ptolemies. They commence with the date of the day, month and year of the king's reign, and continue to recite with the accuracy of a passport and the technicality of a title-deed, descriptions of the contracting parties and the property. They are always endorsed with the names of sixteen witnesses.[4] 4. Receipts for value received.

[1] Brugsch, Numerorum apud Veteres Ægyptos Demoticorum Doctrina, 3, 4to, Berlin. [2] Ibid. 4.

[3] Brugsch, l. c. Spohn, De Lingua et Literatura Veteris Ægypti, 4to, Lipsiæ, 1835; Young in Tattam's Coptic Grammar.

[4] Young, Hieroglyphics.

5. Accounts, of which about half-a-dozen papyri are known. 6. Letters and various epistolary documents, the contents of which unfortunately have not been yet deciphered. 7. Sepulchral inscriptions, on tomb-stones, being various formulæ for the dead.[1] 8. Rituals, or the formulæ usually deposited with the dead in hieroglyphic and hieratic writing, the contents of which have been already analysed; these continued to be written in demotic by the different sects of decaying paganism, the Basilidians, and Gnostics, till the third century, when the Coptic, introduced by the Christians, entirely superseded it, and nothing remained of the old language and literature but a faint remembrance. Originally it was conjectured that the demotic would be the first deciphered, but the contrary has proved the case, for it has not been till the structure of the hieroglyphs was thoroughly understood that the demotic was well analysed. Many new inquirers continue to advance the study; and, although far from perfectly understood, ere long it will be as easy to read a page of hieroglyphs as of Greek or Latin.[2]

[1] Young, l. c. vol. xx.; Inghirami, Mon. Etr. s. vi. t. e. 4, Spohn, l. c.

[2] The principal works on the demotic are: De Sacy, Lettre au citoyen Chaptal, 8vo, Paris, 1802. Akerblad, Lettre à M. De Sacy, 8vo, Paris, 1802. Young, Th., Hieroglyphics, fo. 1819. Young, Rudiments of a Dictionary (appended to Dr. Tattam's Coptic Grammar,) 8vo, Lond., 1830. Kosegarten Bemerkurgen ueber d. Ægyptisch text, 4to, Greifswald, 1824. Leemans, Dr. C., Monuments Égyptiens d. Musée de Leide, fo., Leide, 1838. Dr. Hincks, Enchorial Language of Egypt, 8vo, Dublin, 1833. Journal de la Soc. Orient. d' Allemagne, 8vo, 1839, tom. iii. p. 263. Brugsch, Lettre à M. De Saulcy, Rev. Arch. 1848. Sepr. Numererum. ap. Ægypt. Doctrina, 4to, Berlin, 1849. Sammlung demotisch Urkunden, fo. Berl., 1850. Lettre à M. De Rougé, 4to. Berl., 1850. Grammaire Demotique, fo., Berlin, 1855.

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